

Scientific Paper- APA

Organization of Scientific Reports*		
Section	Information in Section	Page (typed manuscripts)
Title page	Identify topic and variables studies.	1
Abstract	Brief summary of information from major sections of report	2
Introduction and body	Purpose and importance of research. Conclude introduction with hypothesis. Go from general to more specific	Start at page 3
Methods	Provide information about participants, design, materials, and procedures so research can be replicated	No new page
Results	Provide detailed information about findings. Include results of statistical analysis	No new page
Discussion	Interpretation of results, theoretical implications, limitations, applications, and ideas for further research. Include whether results support hypothesis and why or why not.	No new page
References	List authorship and source information. Include citations for all items used in the report. Enables others to locate original source.	Start new page
Supplemental Material	Each type on new page in following order 1. Tables 2. Figures 3. Appendix	Each item start new page

*Each of these elements will be addressed in more detail throughout this document.

Step 1: Planning

- o Locate appropriate material
- o Read source material
- o Construct outline and take notes

Step 2: Writing first draft

- o Proper format
- o Separate sections

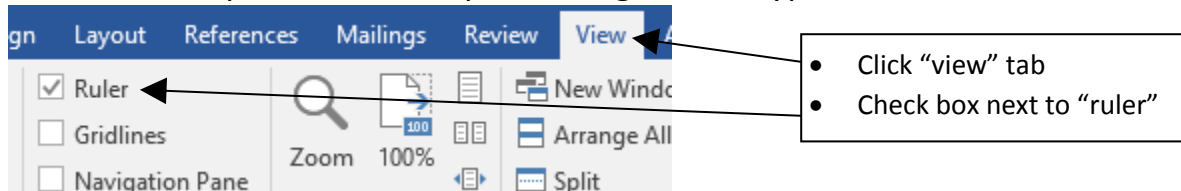
Step 3: Editing and proofreading

- o Grammar and punctuation
- o APA formatting
- o APA references

APA Basics

Formatting APA Style Paper	
Line spacing	<ul style="list-style-type: none"> • Double space throughout • No extra space between paragraph
Alignment	<ul style="list-style-type: none"> • Left for paragraphs and most headings • Level 1 headings are centered
Margins	<ul style="list-style-type: none"> • 1" margins on all sides • Header ½" from top
Typeface	<ul style="list-style-type: none"> • Times New Roman • Size 12
First line of paragraph	<ul style="list-style-type: none"> • Indent at .5" • Exceptions <ul style="list-style-type: none"> ▪ Abstract: Single block paragraph ▪ References: Hanging indent .5"
Page numbers and running head	<ul style="list-style-type: none"> ▪ Running head appears top left of all pages ▪ Page numbers at top right

How to set double space, no extra space, margins, and typeface.



Line spacing:

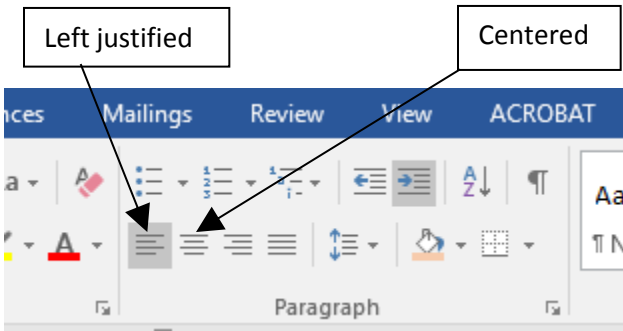
Click here

Check this box to remove extra spaces between paragraphs

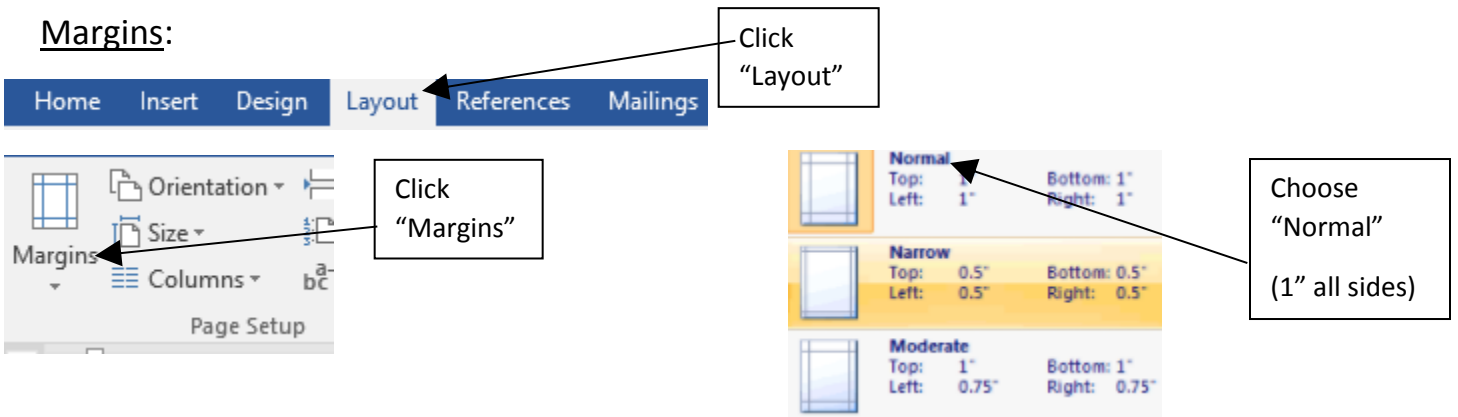
Set line spacing to "double"

Click "OK"

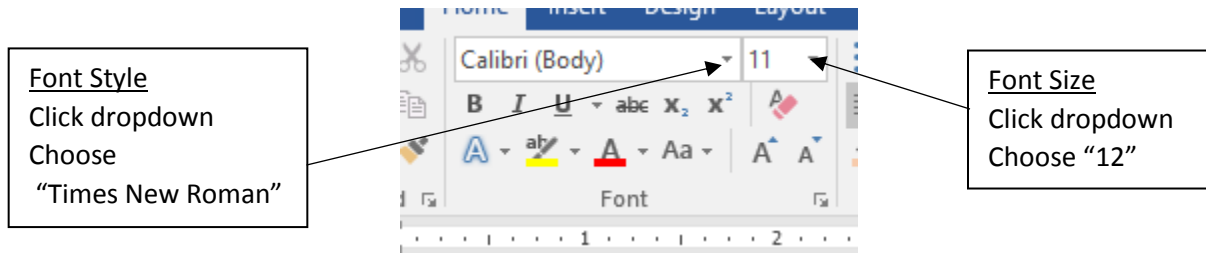
Alignment:



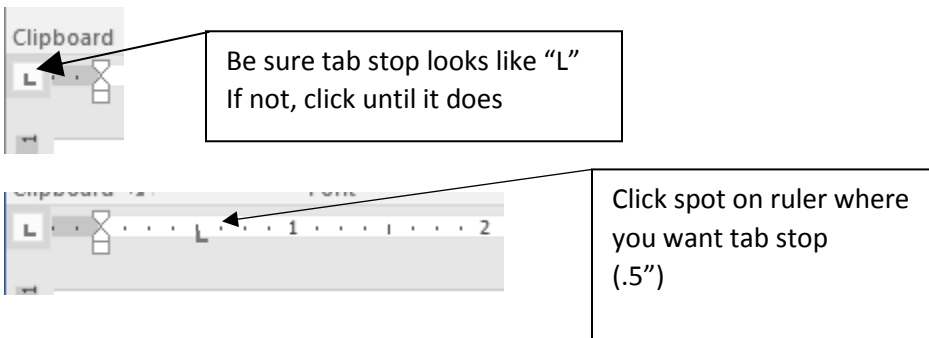
Margins:



Typeface:



Paragraph Indent:



Organization

What to include on the cover page	
Title	<ul style="list-style-type: none"> • Centered • Upper half of page • Capitalize first letter of important words • Words of four or more letters
Author's name	<ul style="list-style-type: none"> • Centered, one line double-spaced below title • First name, Middle initial, Last name • More than one author <ul style="list-style-type: none"> ▪ Include both names on same line with "and"
Institution	<ul style="list-style-type: none"> • Centered • One line double-spaced below author
Running head	<ul style="list-style-type: none"> • In header (instructions below) • Include "Running head" on first page only • After "Running head" <ul style="list-style-type: none"> ▪ Title in all caps ▪ 50 characters or less
Page number	<ul style="list-style-type: none"> • In header • Appears on every page • No dashes, number sig, or "pg" • Set automatic numbering (instruction below)

Title of the essay: may be super long and tedious

First M. Last, First, M. Last, and First M. Last
Enter date here

Mt. San Jacinto College
Anatomy and Physiology 101-1234 Fall 2017
Dr. Roulette

Your cover page will look similar to this.

More information may be added such as course name or number as well as date. Follow instructions provided by your instructor.

Creating the running head

Click "Insert"

Click "Page Number"

Click "Top of Page"

Click "Plain Number 3"

Check "Different First Page"

In the header on the first page type:

Running head: TITLE IN ALL CAPS FIFTY CHARACTERS OR LESS

At end of title hit tab twice and type 1. This will look like

Running head: TITLE IN ALL CAPS FIFTY CHARACTERS OR LESS

1

Hit Ctrl+Enter. This provides a page break and takes you automatically to the next page.

Double click next to 2 on the second page. This will open up the header again.

Tap backspace two times. The 2 will move to the left side of the page

Type your title again in all caps. Do NOT type Running head:

TITLE IN ALL CAPS FIFTY CHARACTERS OR LESS

Hit tab two times to move number. It will look like this

TITLE IN ALL CAPS FIFTY CHARACTERS OR LESS

2

Abstract

The abstract appears on its own page, is not indented, and is double-spaced like the rest of the essay. The first line on your abstract page should have the word “Abstract” centered at the top of the page. The abstract will be a clear and concise summary of the main points of your essay. These points might include your research questions, methods used, and participants in your research, results, analysis of your data, findings and conclusions. Implications of your research as well as consideration for research could also be included. Your abstract should be between 150 and 250 words. At the end of your abstract, include keywords in italics that would be used to help locate your research on search engines.

Keywords:

Section headings

Headings of the paper are used to organize major sections of the paper and subheadings for each section. The introduction of the paper does not need a heading. Other sections will use heading. APA uses five levels of headings:

Level 1:	Centered, Bold, Title case (upper and lowercase)
Level 2:	Flush left, bold, title case
Level 3:	Indented, bold, lowercase paragraph ending with a period
Level 4:	Indented, bold, italicized, lowercase paragraph ending with a period
Level 5:	Indented, italicized, lowercase paragraph ending with a period

Example Section Headings

	Level
Method	1
Sample and Participation Selection	2
Assessments and Measures	2
Q-sort measures of inhibition and aggressiveness.	3
Life history calendar	3
Results	1
Outcome of Inhibited Children at 23 Years	2
Personality and self-esteem	3
Social network.	3
<i>Children's use of social networks.</i>	4
<i>Choosing the right age for social media.</i>	5
Life history and IQ.	3
Discussion	1
Inhibited Children: Delayed Social Transitions During Emerging Adulthood	2
Inhibited Children: Weak Evidence for Internalizing Difficulties	2
Limitations of Present Study	2
Confusions and Future Prospects	2

Bulk of the Paper

The bulk of your paper will be included in the method, result, and discussion sections.

Method: This section will detail how you conducted your test and all the details necessary to replicate if desired.

What did you do to test your hypothesis?

Include conceptual and operational definitions

Was this a study or an experiment?

Participant characteristics

Age

Gender

How were participants prepared?

Sampling Procedures

Survey

Observation

Experiment

Sample size, power

How many participants did you have?

Was your sample population weighted toward a specific population?

Measures and covariates

T-Test

F-Test

CHI Square

N, P, Significance

Research design

Experimental manipulation and interventions

Where did experiment occur?

Did you manipulate the environment in some way?

Did you intervene to create some change?

Did you act to produce some sort of response or action?

Results: This section focuses on the results of your test. Be objective, unbiased and without personal interpretation.

Statistics and data analysis

Accurate and unbiased

Missing data is detrimental to research

Give rationale for choices made

Statistical measures should be included

Ancillary analysis

Participant flow

Period of recruitment

Follow-ups

Intervention and manipulation fidelity

Human intervention in observation or experiment

Purpose of intervention

Benefits of intervention

Include adverse events resulting from intervention

Can be just as important as positive results

Did temperature increase degrade sample?

Did agitation cause a reaction not related to the initial test?

Baseline data

Include all data, even that which contradicts expectations.

Include insignificant findings when theory predicts significant findings.

Do not omit data

Do not include individual scores unless it is statistically significant as an outlier.

Refer to figures, graphs, tables, etc.

Discussion: The discussion sections asks the question “So what?”

What are the implications of the findings?

What can be learned from the information gathered?

Connect discussion with introduction.

Was your hypothesis supported by the results?

Yes? How?

No? Why not

Compare results to hypothesis and focus on points of similarity and difference

Interpret the results

Is there bias that threaten validity?

Are the measurements precise?

Was the sample large or small?

Did this have an impact on the results?

What are the limitations of this research?

Can it be applied to the population?

Can the results be applied to other theories?

What are the weaknesses of this research?

Could the results be replicated?

How can these results lead to further research?

Did the results leave you with questions?

What is the overall significance of the results?

Clarification of and Commentary on Items to Avoid

Items to avoid	Clarification	Comment
Using sexist language	Do not use “he” to refer to a person in general.	Unless you are specifically referring to a man or woman, it is often easier to work with plurals (with the nouns “participants” or “people”) and the gender-neutral pronoun “they.”
Using informal language and colloquial expressions	Phrases such as “kind of,” “sort of,” “lots of,” “pretty much,” and “write up,” although used in conversation, are not appropriate in formal writing.	Be as precise as possible. Find data that allow you to specify numbers or percentages if possible, or use words such as “many” or “few.”
Using the word “prove”	Seek alternatives such as “support the hypothesis” or “gathered evidence for.”	In psychology, conclusions are generally probabilistic, not certain, which is why we avoid the use of “prove.”
Using the word “you” to refer to the reader	Rather than stating “it is important for you to exercise regularly,” report “it is important for people to exercise regularly.”	
Using the words “we,” “us,” or “our” to refer to people in general	Seek alternatives such as “individuals,” “students,” “respondents,” or “people.”	“We” or “our” is appropriate only to refer to the opinions or behaviors of the authors if there is more than one author (e.g., “We recruited a convenience sample.”).
Using phrases such as “The first article indicated,” “The next article demonstrated.”	Use citations such as “Myers (2008) reported” or “_____ and _____ indicated.”	In a literature review, integrate material topically, using meaningful transitions such as “Similarly,” “In contrast,” or “Moreover.”
Using titles of articles (except in References) or authors’ first names.	Use citations as illustrated above.	
Using males and females as nouns	Use “men” and “women” as nouns (e.g., 30 men and 30 women).	Use “male” and “female” as adjectives (e.g., Male participants read a scenario.)
Using contractions	Write “have not” rather than “haven’t.”	

Appendices and Other Supplements

Any supporting information including the appendix, graphs, charts, images, survey materials, etc. appears after the references page.

Appendix:

The appendix is where brief text material is located. This includes stimulus material; description of equipment used, detailed demographic information, etc. If you have more than one Appendix, label them Appendix A, Appendix B and so on. Each appendix appears on its own page. Appendix is written at the top and is centered. If more than one Appendix, then Appendix A, Appendix B etc. appears at the top of the page. This order is determined by the order they are mentioned in the text.

The appendix may contain images, tables, equations, etc. The tables and figures in the Appendix will be numbered Table A1, Figure B1, Table C2, depending on number of item and the number of the appendix.

Graphs, charts, images, survey materials, etc.

These are going to be placed in order as they appear in the essay. Graphs will be together in order of appearance; charts will be in order of appearance, etc. These will be labeled:

Chart

Include visible representation of data. Can be any combination of charts.

Bar Chart

Line Chart

Pie Chart

Image

A picture of something important to the paper. Pictures of materials used, experiments, important tools, etc.

Table

Collection of data placed in rows and columns.

Use to include actual data from study and/or experiments

Appendix A

Sample Annotated Manuscript

Note: The copy above the line below constitutes the name of this section. The material below this line and in the running head above is part of the sample copy itself.

Tell Me More: Online Versus Face-to-Face Communication and
Self-Disclosure

Olivia E. Bruss and Jennifer M. Hill

Wisconsin Lutheran College

Page numbering starts on the title page, right-justified in the header area.

Running head—The running head is left-justified. The words “Running head” (followed by a colon, with only the R capitalized) appear in the header area for the title page only. The actual running head that appears on all pages is typed in all capital letters

Key words (and all words with four or more letters) in the title begin with capital letters. The title, authors’ names, and byline (affiliation) are all centered.

Authors’ names are on a line double-spaced below the title and affiliation is on the next double-spaced line.

Abstract

The abstract is a single block paragraph. Length limits vary for different journals.

Information from Introduction (purpose).

Information from Method (participants and design).

Citations in the Abstract do not "count" as the first citation within the text of the manuscript.

Information from Results that includes specific measure used.

Information about Discussion.

The purpose of this study was to examine the effect of type of communication (online or face-to-face) on self-disclosure. A group of 58 college students engaged in a conversation either face-to-face or using an instant-messaging system. Those who conversed online reported a significantly higher amount of personal and perceived partner self-disclosure as measured by an adapted version of the Revised Self-Disclosure Scale (Wheless, 1978) than those who conversed face-to-face. Implications regarding online communication and its impact on counseling, educational, and personal relationships are discussed.

In the Abstract, *all* numbers are expressed as numerals. Do not begin a sentence with a number in the Abstract. Elsewhere in the manuscript, any number greater than or equal to 10 is also expressed as a numeral (unless it begins a sentence). However, numbers less than 10, with some exceptions, are expressed in words.

Tell Me More: Online Versus Face-to-Face Communication and Self-Disclosure

In today's technology-centered world, people are no longer required to communicate and form relationships in face-to-face situations alone. In fact, the use of electronic forms of communication, such as text-messaging or online interaction, is rapidly becoming a primary tool for many people to form and maintain many of their relationships. For instance, a recent online survey of 439 college students showed that nearly 20% of college students spent over 20 hr per week online (Burst Media, 2007). This shift in communication impacts several different categories of relationships people have: familial relationships, friendships, romantic relationships, professional relationships, and educational relationships. Consequently, the impact of online communication on building and maintaining relationships is important to understand.

Self-disclosure has been viewed as a key component in developing close relationships (Altman & Taylor, 1973). Jourard and Lasakow (1958, p. 91) defined self-disclosure as "the process of making the self known to other persons." According to this perspective, self-disclosure builds trust which leads to closer relationships. When one individual takes a risk by disclosing to another individual, the receiver feels as though he or she is trusted. In return, the receiver is more likely to disclose information as well. Trust and security are developed when two people respond to one another positively over repeated interactions, which continually strengthen the relationship. A key element of the relationship is that the individuals involved must perceive that their disclosures are being accepted.

Therefore, the process is mutually reinforcing (Bennis, Schien, Berlew, & Steele, 1964).

With the rapid growth of technology, people can now self-disclose

The introduction begins with the title, not the word Introduction.

There are two spaces between sentences.

Note the comma after the introductory phrase.

Abbreviate units of time.

Note the use of a colon after an independent clause that is extended with additional information.

Initial paragraph emphasizes the relevance of the topic.

Example of parenthetical citation with use of an ampersand (&).

Example of citation in narrative with use of "and." Because this citation involves a quote, it also includes a page number.

If a citation contains three to five authors, all are included in the first citation in the text, with a comma between them and between the last author and the year.

Note the use of a comma before the coordinating conjunction that separates two independent clauses.

If multiple citations are included in the same parentheses, the citations are listed in alphabetical order by the name of the first author.

Note the appropriate use of a semicolon between two closely related independent clauses.

The year is always included in parenthetical citations.

using more indirect means like the Internet, and several recent studies have begun to more closely examine self-disclosure during online communication (Chiou, 2006; Punyanunt-Carter, 2006; Valkenburg & Peter, 2007). One of the most common explanations proposed for people's tendency to self-disclose online is the fact that online communication increases anonymity. This anonymity can then produce a state of deindividuation in which others are not seen as individuals; consequently, people lose their inner restraints (Chiou, 2006). In other words, people may feel more comfortable with self-disclosure online because others do not necessarily know who they are as individuals and their disclosures online are less likely to produce immediate social repercussions.

Online Versus Face-to-Face Communication and Self-Disclosure

Although numerous researchers have compared the self-disclosure of participants in online situations versus those in face-to-face situations, results have been mixed. Tidwell and Walther (2002) found that participants in online situations demonstrated higher self-disclosure than those in face-to-face situations. Conversely, others found that participants in a face-to-face situation reported greater self-disclosure than those interacting online (Mallen, Day, & Green, 2003; Skinner & Latchford, 2006).

Notice the logical organization of information in this paragraph about disparate results. The systematic use of the terms first, second, and third provide a structure to the coverage.

If a citation includes more than two authors, only the first author's name (followed by et al.) is used after the initial citation. Et al. means "and others." There is a period after "al" (because it is an abbreviation for alia) but not after "et" (because it is an unabbreviated word).

Factors that may have contributed to the different results should be noted. First, researchers have studied the relationship between type of communication and self-disclosure in different ways. Some have assigned participants to one of two communication conditions (online versus face-to-face) and looked for differences in self-disclosure (Mallen et al., 2003; Tidwell & Walther, 2002). Others examined differences in perceived self-disclosure between those who self-reported using online communication regularly, compared to those who said they used it less

frequently (Cho, 2007; Skinner & Latchford, 2006). Second, different forms of computer-mediated communication (CMC) were used in these studies, including synchronous (instant messaging) and asynchronous (e-mail and support group webpage) methods. Third, these studies differed in their measurements of self-disclosure as well; some employed self-reports and some used judges to rate the degree and quality of self-disclosure, often by rules of linguistics.

Another facet of self-disclosure is the phenomenon of reciprocity. This states that if people perceive that their discussion partners are self-disclosing to them, they will in-turn self-disclose more to their partners (Barak & Gluck-Ofri, 2007). The extant literature indicates that reciprocity does occur online (Barak & Gluck-Ofri, 2007) and describes the factors that impact reciprocity online (Rollman, Krug, & Parente, 2000; Rollman & Parente, 2001). However, to our knowledge, no studies exist that have investigated whether people perceive their partners as self-disclosing more in an online situation or a face-to-face situation. This would be necessary to determine if reciprocity occurs to a greater degree online than face-to-face.

Purpose and Hypotheses

The goal of the present research is to gain more clarity regarding the relationship between type of communication and self-disclosure.

Specifically, the current study extends previous research in the area by (a) employing an experimental rather than retrospective design and (b) comparing whether the perception of partner self-disclosure is greater online or face-to-face situation. First, we hypothesized that because online communication increases anonymity (Chiou, 2006), participants in the online group will report higher levels of personal self-disclosure than those in the face-to-face group. Second, based on the concept of reci-

An abbreviation is initially introduced by putting it in parentheses after the term to which it refers. In subsequent mentions of the concept, only the abbreviation is used. Although APA guidelines suggest that it is preferable not to introduce an abbreviation for a term that is subsequently used less than three times, this manuscript does not follow that guideline.

In this paragraph, after introducing the topic of reciprocity, the authors discuss a gap in the literature that provides justification for their own study.

The authors state explicitly the goal of their research.

Within this sentence, notice how the authors identify elements in a series by lowercase letters in parentheses.

In the hypotheses, the authors identify specify variables and how they expect them to influence each other.

procuity (Barak & Gluck-Ofri, 2007), we hypothesized that those participating in online discussions would perceive that their conversation partners disclose more to them than those participating in face-to-face discussions.

Method

Participants

Participants were recruited through an undergraduate psychology department-sponsored research activity. Initially, 60 participants completed the study, but two participants were not included in the final analyses due to incomplete data. The remaining participants included 58 (25 men, 33 women) undergraduate students attending a small liberal arts college in the Midwest, and the majority of the sample was Caucasian (97%). The participants' ages ranged from 18 to 28 ($M = 20.10$, $SD = 1.78$). Two conditions existed: the online communication group and the face-to-face communication group. The participants in the online group consisted of 14 men and 15 women, whose ages ranged from 18 to 28 ($M = 20.38$, $SD = 2.19$). The participants in the face-to-face group consisted of 11 men and 18 women, and their ages ranged from 18 to 22 ($M = 19.83$, $SD = 1.23$).

Instruments and Apparatus

The researchers employed an adapted version of the Revised Self-Disclosure Scale (RSDS; Wheelless, 1978) to determine participants' level of self-disclosure. Nineteen items from the original scale were reworded to be more applicable to the interaction in this particular experiment. Nine items were used to measure the amount and quality of each participant's disclosure in this situation (personal self-disclosure). Sample items include "In this experience, I often disclosed intimate personal things about myself without hesitation" and "In this experience, I did not often talk about myself."

The heading of the Method is centered and is in boldface type.

This Level 2 heading is flush left and boldface.

Numbers less than ten are typically expressed using words (with some exceptions). More common exceptions include consistent use of numbers for time, age, scores, points on a scale, and for numbers that indicate a position in a series (such as Table 2).

Note the appropriate placement of an apostrophe to indicate plural possessive.

Abbreviations for statistics (mean and standard deviation) are italicized.

This Participants section contains basic, required demographic information about number of participants, age, gender, and ethnicity.

This Level 2 heading is flush left and boldface with capital letters at the beginning of key words.

Always use words to express a number that begins a sentence.

In this and the following paragraph, notice the detailed information provided about the scale (source, number of items that measured each construct, sample items, the type of answer options, and the numerical and verbal anchors for the answer options).

The remaining 10 items measured the amount and quality of disclosure from the partner in this situation (perceived partner self-disclosure). Sample items included “In this experience, my partner talked about his/herself for fairly long periods at a time” and “In this experience, my partner did not seem honest in his/her self-disclosures.” Participants were asked to indicate their agreement with the items on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Numbers representing points on a scale are expressed in numerals, an exception to the rule about using words to express numbers less than 10.

The participants used five of Aron, Melinat, Aron, Vallone, and Bator’s (1997) Closeness-Generating Questions, which were designed to encourage self-disclosure. One example question is, “If you have to move from where you consider home, where would you go, and what would you miss the most about home?”. Lastly, participants responded to an eight-question demographic survey on which they reported their age, gender, year in school, and the extent to which they felt they knew their partner before this experiment.

Verbal anchor points for a scale are italicized.

Typically the period goes inside the quotation marks when the material occurs at the end of a sentence, but in this case the material is a question, even though the sentence itself is not.

In addition, the participants in the online condition used computers in the following manner. The researchers placed 15 laptops in two rooms (A and B) on two different floors. Each computer had a number 1 through 15. Each computer also had a mock instant messaging (IM) account already on the screen. The individual IM accounts on each screen allowed the participant to communicate with only one other account, which was already up on the screen of the corresponding computer in another room on a different floor. Therefore, participants communicated online with the person in the other room sitting at the computer with the same number. For instance, the participant seated at Computer 1 in Room A communicated online only with the person seated at Computer 1 in Room B. Each participant was assigned a gender-neutral pseudonym that appeared at the top of each IM account (e.g.,

This is example of the use of a numeral to express a number less than 10 that designates a place in a series.

Capitalize words that indicate placement within a series.

Sam024689753, Taylor035798642, and Jess035798642). In addition, all participants were asked not to reveal their real names to their partners.

Procedure

The independent variable was type of communication (online versus face-to-face) and participants were assigned to one of these two conditions as they arrived at the study. We randomly assigned partners only in the face-to-face condition. The dependent measures were personal self-disclosure and perceived partner self-disclosure.

Online condition. Participants entered the room and picked a computer by seating themselves. Consequently, pairs were created through convenience sampling. Each pair then was given five questions to discuss, and each topic was designed to encourage self-disclosure (Aron et al., 1997). The researchers asked participants not to reveal their names to each other and to stop the conversation and notify the researchers if they suspected that they knew their partner. This, however, did not occur. The researchers then informed the participants to keep conversing until instructed to do otherwise. After 15 min, the researchers stopped the conversations and the participants filled out the survey packet, which included an adapted version of the RSDS (Wheless, 1978) and a demographic survey. Participants took approximately 3 min to complete these surveys.

Face-to-face condition. All participants entered the same room and received an informed consent. The researchers randomly assigned pairs by having participants pick numbers out of a container and pair up with the person with the same number. Participants were asked if they knew their partners (more than just in passing) before this interaction, and if they did, they would have been reassigned. However, this did not hap-

In this opening paragraph of the Procedure, the authors describe the experimental design and identify the independent and dependent variables.

Min is the standard APA style abbreviation for minutes. The abbreviation is not followed by a period.

Numbers referring to time are also always expressed in numerals, another exception to the less than 10 rule.

This description of the face-to-face condition includes information about informed consent and debriefing.

pen. Pairs then were given the same choices of topics as the online condition and the same time limit. After 15 min, the researchers stopped the conversations and handed out the survey packets, which contained all the same instruments as the packets for the online group. The participants in both the online and face-to-face groups were given debriefing statements after they handed in their survey packets.

Results

For the entire sample, mean response scores for personal self-disclosure on the adapted version of the RSDS (Wheeless, 1978) ranged from 3.56 to 6.56 ($M = 5.09$, $SD = 0.68$) on a scale from 1 to 7. The Cronbach's α for the personal self-disclosure items was .64. An independent t test was conducted to explore the impact of communication group (online or face-to-face) on levels of personal self-disclosure. Mean personal self-disclosure responses for the online group ($M = 5.30$, $SD = 0.66$) were significantly higher than the face-to-face group ($M = 4.88$, $SD = 0.65$), $t(56) = 2.45$, $p = .02$. The partial eta squared statistic was .10, indicating a large effect.

For perceived partner self-disclosure, entire sample mean response scores on a scale from 1 to 7 ranged from 1.90 to 6.10 ($M = 4.80$, $SD = 0.69$). The Cronbach's α for perceived partner self-disclosure items was .71. An independent t test was conducted to explore the impact of communication group (online or face-to-face) on levels of perceived partner self-disclosure. Mean perceived partner self-disclosure responses for the online group ($M = 5.02$, $SD = 0.57$) were significantly higher than the face-to-face group ($M = 4.58$, $SD = 0.74$), $t(56) = 2.49$, $p = .02$. The partial eta squared statistic was .10, indicating a large effect.

The opening paragraph is the analysis of the first dependent variable. Cronbach's alpha is a measure of internal consistency, which means that it measures how closely all the items on a scale relate to each other.

This sentence describes the results of one type of inferential statistical test, a t test. This type of t test is used to determine whether the difference between two sample groups is likely to occur in the population or whether the difference is attributable to random fluctuation (chance). The authors state that the difference was significant, meaning that the difference is likely to be attributable to the independent variable (communication group) rather than to chance.

Discussion

Type of Communication and Self-Disclosure

The purpose of the study is restated.

The authors explicitly state whether the hypothesis about the predicted results was supported.

Current findings are placed in the context of existing literature.

A possible explanation is offered for why results differ from those of a prior investigation.

Information in this paragraph expands on possible reasons for personal self-disclosure results in the present research.

This research study sought to examine the relationship between online or face-to-face communication and self-disclosure. As predicted, the participants in the online communication group reported higher levels of personal self-disclosure and perceived partner self-disclosure than those in the face-to-face group. These results are in line with Tidwell and Walther's (2002) findings, but contradict Mallen et al.'s (2003) results, which indicated that those in face-to-face pairs self-disclosed more than those in online pairs. These differences may reflect measurement issues. Mallen et al. (2003) measured self-disclosure with one item that focused on the amount of self-disclosure. Specifically, they asked participants to rate their own self-disclosure from 1 (*no self-disclosure*) to 6 (*extreme self-disclosure*), whereas the present study's measure contained nine items that were also meant to assess one's perception of both the quality and amount of self-disclosure.

Results from the current study suggest that online communication may increase people's personal self-disclosure in general, helping them along in the early stages of relationship building. Several previous researchers have provided possible explanations for the present results. A common explanation is the anonymity that an online environment provides, which allows people to feel safer self-disclosing (Chiou, 2006). Tidwell and Walther (2002) proposed another explanation for greater disclosure in an online setting. They noted that many of the ways people get to know others (e.g., reading and interpreting nonverbal cues) are not possible in online communication. Therefore, people communicating online may actually be limited to using self-disclosure as a means to get to know one another. Because this form of communication is fairly commonplace

in present times, people may now expect self-disclosure by themselves and others in online communication because no other means of getting to know each other is possible. If this norm of self-disclosure does in fact exist online, it may explain why the online group in this study reported higher personal self-disclosure.

Finally, results indicated that people perceive their communication partners as disclosing more in an online situation than in a face-to-face situation. This suggests that the phenomenon of reciprocity may occur to a greater degree online than face-to-face. Therefore, these findings may serve as another explanation of why people disclose more online in general. The online participants may have felt that their partners were self-disclosing more than the face-to-face participants felt their partners were self-disclosing. In turn, this may have then influenced the online group to self-disclose more to their partners than the face-to-face group felt necessary to disclose to theirs.

Practical Applications and Future Directions

Due to the prevalence of online communication in the world today, the results of this study can be applied to practical situations. This study can contribute to the debate concerning the effectiveness of online counseling (Mallen & Vogel, 2005; Murphy & Mitchell, 1998; Rochlen, Zack, & Speyer, 2004; Young, 2005). Because online communication elicited more self-disclosure, online communication may be an effective venue for forming therapeutic relationships. Online therapy may appeal to and benefit clients for several other reasons, which are discussed extensively in other research articles; therefore, we provide only a brief overview of the benefits here. The anonymity of online communication may make clients feel more open when disclosing to counselors (Chiou, 2006). Furthermore, because the Internet can hide the client's and thera-

This paragraph focuses on participants' perceptions of their partners' disclosure. Again, potential explanations are offered, expanding readers' understanding of the results rather than just iterating the findings.

In this section, the authors highlight the importance of their study by indicating how results can be applied. In the first paragraph, the authors discuss clinical applications; in the second paragraph, they discuss academic applications. Such organization enhances readers' understanding.

pist's age, race, other physical features, and clothing style or quality, the harmful assumptions and judgments about others that people often make in person will not exist. This may allow for less biased communication from the client and genuine therapeutic guidance (Rochlen et al., 2004). Despite the possible benefits of online therapy, research on its effectiveness is still needed. Therefore, counselors should practice online counseling cautiously by taking extra ethical precautions, such as ensuring confidentiality, formulating an emergency protocol, and obtaining informed consent for treatment (Casper, 2004).

Furthermore, the present results may also be useful in academic settings. Because online communication elicited more self-disclosure, teachers may consider using it to form closer relationships with their students so they can better meet their students' needs. Using online communication may make students feel more comfortable asking teachers or other students' questions because of the anonymity it can provide. Similarly, online communication may be used in this way for students to assist each other with academic assignments. Naturally, the present study's results suggest that future research examine whether online communication may be used to increase disclosure and strengthen new business relationships between colleagues as well as personal relationships (familial, romantic, and platonic).

This paragraph addresses limitations of the present research and possible ways to overcome them in future investigations.

Given that online communication will likely continue to grow rapidly, research about the impact of online communication on self-disclosure and relationships is necessary. Due to the small and racially homogenous sample size, future studies should employ a larger and more ethnically diverse sample. Because this study took place on a small campus of less than 1000 students, the anonymity of online communication may have played a role in producing more self-disclosure in the online

group. This may have occurred because participants in the face-to-face group may have guarded their disclosures more than those in the online group if they thought they were likely to see their partners on campus later. This phenomenon may not occur in a larger sample from a bigger university or from a noncollege sample.

Additionally, future researchers should consider other important moderating variables to better understand the relationship between type of communication (online versus face-to-face) and self-disclosure. In particular, it would be helpful to consider the impact of certain personal characteristics, such as age, personality, race, culture, socioeconomic status, intelligence, and writing ability. Furthermore, the present study did not consider the effects of large amounts of self-disclosure on relationships; for example, future studies could examine how and in which situations excessive self-disclosure can harm a relationship. Finally, it would be beneficial to examine how online versus face-to-face communication impacts self-disclosure for particular types of relationships, such as student–teacher, client–therapist, romantic, and familial.

The concluding paragraph also addresses future research, highlighting specific variables that researchers may investigate.

References

- Every reference included in the article is listed in the References section.
- References are listed in alphabetical order by the last name of the first author.
- Citations use a “hanging” indentation.
- There is only a single space after the period that follows each reference element (e.g., year, title).
- If there is more than one author, an ampersand (preceded by a comma) is used before the last author’s surname.

For books and book chapters, include city and state (or city and country, if not in the United States).

This citation is an example of a reference to an entire book. For a book, the title is italicized.

- If an author’s middle initial is provided in the article, the middle initial is included in the citation (with a space after the period between initials).

This citation is an example of a reference to a journal article, the most common type of source in a typical article.

- Note the order of reference elements, the use of capitalization in the article compared to the journal title, and the use of italics for the journal name and volume number (but not for the article title or page numbers).
- There is a period after the page numbers, but not after the doi (digital object identifier).

This citation is for an online newsletter. As is the case for a doi, make sure not to put a period after a URL because it could be confused as part of the URL rather than as punctuation.

If a journal article does not have an assigned doi, provide the URL of the journal’s home page.

Altman, I., & Taylor, D. (1973). *Social penetration: The development of interpersonal relationships*. New York, NY: Holt, Rinehart, & Winston.

Aron, A., Melinat, E., Aron, E. N., Vallone, R. D., & Bator, R. J. (1997). The experimental generation of interpersonal closeness: A procedure and some preliminary findings. *Personality and Social Psychology Bulletin*, 23, 363–377. doi:10.1177/0146167297234003

Barak, A., & Gluck-Ofri, O. (2007). Degree and reciprocity of self-disclosure in online forums. *CyberPsychology & Behavior*, 10, 407–417. doi:10.1089/cpb.2006.9938

Bennis, W. G., Schien, E. H., Berlew, D. E., & Steele, F. I. (1964). *Interpersonal dynamics*. Homewood, IL: Dorsey Press.

Burst Media (2007). *Online insights*. Retrieved from http://www.burst-media.com/assets/newsletter/items/2007_07_01.pdf

Casper, F. (2004). Technological developments and applications in clinical psychology and psychotherapy: Introduction. *Journal of Clinical Psychology*, 60, 221–230. doi:10.1002/jclp.10260

Chiou, W. (2006). Adolescents’ sexual self-disclosure on the Internet: Deindividuation and impression management. *Adolescence*, 41, 547–561. Retrieved from http://www.vjf.cnrs.fr/clt/php/va/Page_revue.php?ValCodeRev=ADO

Cho, S. H. (2007). Effects of motivations and gender on adolescents’ self-disclosure in online chatting. *CyberPsychology & Behavior*, 10, 339–345. doi:10.1089/cpb.2006.9946

Jourard, S. M., & Lasakow, P. (1958). Some factors in self-disclosure. *Journal of Abnormal and Social Psychology*, 56, 91–98. doi:10.1037/h0043357

- Mallen, M. J., Day, S. X., & Green, M. A. (2003). Online versus face-to-face conversations: An examination of relational and disclosure variables. *Psychotherapy: Theory, Research, Practice, Training*, 40, 155–163. doi:10.1037/0033-3204.40.1-2.155
- Mallen, M. J., & Vogel, D. L. (2005). Introduction to the major contribution: Counseling psychology and online counseling. *The Counseling Psychologist*, 33, 761–776. doi:10.1177/0011000005278623
- Murphy, L., & Mitchell, D. (1998). When writing helps to heal: E-mail as therapy. *British Journal of Guidance & Counseling*, 26, 21–32. doi:10.1080/03069889800760031
- Punyanunt-Carter, N. M. (2006). An analysis of college students' self-disclosure behaviors on the Internet. *College Student Journal*, 40, 329–331. Retrieved from http://www.projectinnovation.biz/cs_j_2006.html
- Rochlen, A. B., Zack, J. S., & Speyer, C. (2004). Online therapy: Review of relevant definitions, debates, and current empirical support. *Journal of Clinical Psychology*, 60, 269–283. doi:10.1002/jclp.10263
- Rollman, J. B., Krug, K., & Parente, F. (2000). The chat room phenomenon: Reciprocal communication in cyberspace. *CyberPsychology & Behavior*, 3, 161–166. doi:10.1089/109493100316003
- Rollman, J. B., & Parente, F. (2001). Relation of statement length and type and type of chat room to reciprocal communication on the Internet. *CyberPsychology & Behavior*, 5, 617–622. doi:10.1089/109493101753235214
- Skinner, A. E. G., & Latchford, G. (2006). Attitudes to counseling via the Internet: A comparison between in-person counseling clients and Internet support group users. *Counseling and Psychotherapy Research*, 6, 158–163. doi:10.1080/14733140600853641

This citation illustrates the correct use of capitalization after a colon.

Alphabetize entries with the same first author according to the first difference between the two citations (ignoring "&"), not necessarily by the year of publication.

This article title illustrates correct use of a hyphen; all "self" compounds should be hyphenated.

Tidwell, L. C., & Walther, J. B. (2002). Computer-mediated communication effects on disclosure, impressions, and interpersonal evaluations: Getting to know one another a bit at a time. *Human Communication Research, 28*, 317–348. doi:10.1111/j.1468-2958.2002.tb00811.x

This article title illustrates correct usage of apostrophes for plural possessives.

Valkenburg, P. M., & Peter, J. (2007). Preadolescents' and adolescents' online communication and their closeness to friends. *Developmental Psychology, 43*, 267–277. doi:10.1037/0012-1649.43.2.267

Wheeless, L. R. (1978). A follow-up study of the relationships among trust, disclosure, and interpersonal solidarity. *Human Communication Research, 4*, 143–157. doi:10.1111/j.1468-2958.1978.tb00604.x

Young, K. S. (2005). An empirical examination of client attitudes towards online counseling. *CyberPsychology & Behavior, 8*, 172–177. doi:10.1089/cpb.2005.8.172

Appendix B

Constructing Grammatical Sentences

Proper sentence structure	Explanation	Correct example	Incorrect usage (see bolding)
Construct complete sentences and avoid sentence fragments.	A sentence expresses a complete thought and typically contains a subject and a verb. A fragment does not express a complete thought.	Because employers may consider being young as a plus (Finkelstein & Burke, 1998), older applicants may have difficulty obtaining an interview.	Because employers may consider being young as a plus (Finkelstein & Burke, 1998).
Use parallel construction.	Use a similar grammatical form to express each item in a series.	Limitations of this online research included convenience sampling, potential for socially desirable responding, and lack of control over the experimental environment.	Limitations of this online research included convenience sampling, participants who may have responded in a socially desirable manner , and the fact that the researcher did not control the experimental environment.
Make sure the subject agrees with the verb. (Remember, the word “data” is plural.)	The verb should be consistent with the subject in number (singular or plural) and person (1st, 2nd, or 3rd).	High scores on the ageism scale indicate more negative attitudes about older individuals.	High scores on the ageism scale indicates more negative attitudes about older individuals.
Make sure a pronoun agrees with the noun to which it refers.	A pronoun should be consistent in number (singular or plural) and person (1st, 2nd, or 3rd) with the noun that it replaces.	When individuals feel stereotyped, they may fall victim to self-fulfilling prophecies (Hilton & Von Hippel, 1996).	When an individual feels stereotyped, they may fall victim to self-fulfilling prophecies (Hilton & Von Hippel, 1996).
Make sure pronouns have a clear referent.	There should be no doubt about the noun to which a pronoun refers.	If older job applicants are viewed as resistant to change, employers may be less likely to hire them particularly when the pool of job applicants is large. This stereotyping of older applicants could lead to problems of discrimination.	If older job applicants are viewed as resistant to change, employers may be less likely to hire them particularly when the pool of job applicants is large. This could lead to problems of discrimination.
Use similar words appropriately.	Correctly distinguish between words that sound or look alike (e.g., “then” and “than,” “their” and “there”).	Participants perceived that younger workers performed more efficiently than did older workers (Finkelstein & Burke, 1998).	Participants perceived that younger workers performed more efficiently then did older workers (Finkelstein & Burke, 1998).
Use apostrophes appropriately.	Apostrophes indicate possession or contraction, never whether a word is plural, and their placement differs for singular and plural nouns.	Kwong See and Heller (2004) explained how shifting standards for what is good across age groups may affect participants’ responses.	Kwong See and Heller (2004) explained how shifting standards for what is good across age groups may affect participant’s responses.
Use a comma before a conjunction that separates two independent clauses.	Use a comma before a “coordinating conjunction” when the conjunction is used to connect two independent clauses. Coordinating conjunctions include For, And, Nor, But, Or, Yet, and So (FANBOYS).	Martens et al. (2004) reported that people do not want to be reminded of their own mortality, and older adults only serve as a reminder of the reality of aging and dying.	Martens et al. (2004) reported that people do not want to be reminded of their own mortality and older adults only serve as a reminder of the reality of aging and dying.

Proper sentence structure	Explanation	Correct example	Incorrect usage
Use a comma after introductory phrases, clauses, or words before the main independent clause.	If a sentence begins with a phrase or clause that does not express a complete thought, put a comma at the end of that phrase or clause.	Because of the increasing number of older workers, ageism in employment has become a topical issue (William & Nussbaum, 2001).	Because of the increasing number of older workers ageism in employment has become a topical issue (William & Nussbaum, 2001).
Do not use a comma between clauses when the dependent clause follows the main clause.	If a sentence includes an independent clause followed by a dependent clause, do not put a comma between the two clauses.	Ageism in employment has become a topical issue because of the increasing number of older workers (William & Nussbaum, 2001).	Ageism in employment has become a topical issue, because of the increasing number of older workers (William & Nussbaum, 2001).
Use a comma after each item in a series of three or more items.	If a sentence includes a series of items, put a comma between them.	Laczko and Philipson (1991) found that older workers exhibited high energy, flexibility, and a willingness to learn.	Laczko and Philipson (1991) found that older workers exhibited high energy, flexibility and a willingness to learn.
Avoid comma splices.	When only a comma connects two independent clauses, it is called a comma splice. Avoid this error by using a semicolon or a period.	We hypothesized that participants would perceive older workers as more resistant to change than younger workers. We derived this hypothesis from Reio and Sanders-Reio's (1999) findings that older adults were set in their ways.	We hypothesized that participants would perceive older workers as more resistant to change than younger workers, we derived this hypothesis from Reio and Sanders-Reio's (1999) findings that older adults were set in their ways.
Do not use a comma between a subject and a predicate (the part of a sentence including the verb).	There is no comma used between these two primary sentence components.	Another factor that may influence the reporting of discrimination is the accountability of employees.	Another factor that may influence the reporting of discrimination, is the accountability of employees.
Do not use a comma between two parts of a compound subject.	A subject may include more than one noun. If it does, do not put a comma between them.	Media and advertisements may reinforce ageist attitudes.	Media, and advertisements may reinforce ageist attitudes.
Do not use a comma between two parts of a compound predicate.	A predicate may contain more than one verb or verb phrase. If it does, do not put a comma between them.	Older employees can contribute considerably to a company and should be valued for their achievements.	Older employees can contribute considerably to a company, and should be valued for their achievements.
Use semicolons correctly.	The most common use of a semicolon is to separate two independent clauses not connected with a conjunction.	Lawmakers enacted the Age Discrimination Act to protect older workers from discrimination; legislators designed the Act to provide guidance to employers.	Lawmakers enacted the Age Discrimination Act to protect older workers from discrimination; providing guidance to employers.
Use colons correctly.	The most common use of a colon is to separate a grammatically complete (independent) clause from a final phrase that extends it.	Fraboni, Saltstone, and Hughes (1990) indicated that their ageism scale included three primary factors: antilocation, avoidance, and discrimination.	The three primary factors of the ageism scale were: antilocation, avoidance, and discrimination (Fraboni, Saltstone, & Hughes, 1990).

References

- Finkelstein, L. M., & Burke, M. J. (1998). Age stereotyping at work: The role of rater and contextual factors on evaluations of job applicants. *Journal of General Psychology, 125*, 317–345. doi:10.1080/00221309809595341
- Fraboni, M., Saltstone, R., & Hughes, S. (1990). The Fraboni Scale of Ageism (FSA): An attempt at a more precise measure of ageism. *Canadian Journal on Aging, 9*, 56–66. doi:10.1017/S0714980800016093
- Hilton, J. L., & von Hippel, W. (1996). Stereotypes. *Annual Review of Psychology, 47*, 237–271. doi:10.1146/annurev.psych.47.1.237
- Kwong See, S. T., & Heller, R. B. (2004). Judging older targets' discourse: How do age stereotypes influence evaluations?. *Experimental Aging Research, 30*, 63–73. doi:10.1080/03610730490251487
- Laczko, F., & Philipson, C. (1991). *Changing work and retirement*. Buckingham: Open University Press.
- Martens, A., Greenberg, J., Schimel, J., & Landau, M. J. (2004). Ageism and death: Effects of mortality salience and perceived similarity to elders on reactions to elderly people. *Personality and Social Psychology Bulletin, 30*, 1524–1536. doi:10.1177/0146167204271185
- Reio Jr., T. G., & Sanders-Reio, J. (1999). Combating workplace ageism. *Adult Learning, 11*(1), 10–13. Retrieved from <http://www.aaace.org>
- Williams, A., & Nussbaum, J. F. (2001). *Intergenerational communication across the life span*. Mahwah, NJ: Lawrence Erlbaum Associates.