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Get Back! The Use of Personal Space Among College Students

Sarah Crowe

Abstract: Research on personal space has found that individual cultures and ethnic groups have a similar preference for the use of personal space within each respective group. Differences in the use of personal space exist across gender, as women tend to share a closer proximity than men. The purpose of this study was to measure the use of personal space among college students. Use of personal space was defined in this study as the preference or need for a specific amount of personal space. Specifically, the researcher hypothesized differences across gender and ethnicity would be found. Survey methodology was used to measure different variables of personal space among private university students (N=102). The results indicated that male students feel more comfortable than female students in greeting an acquaintance of the opposite gender with a hug or a kiss. Female students reported being more comfortable than male students in greeting an acquaintance of the same gender. An agenda for future research that includes cultural differences among college students was described.

Personal space is the distance we keep from others and the space people consider their territory—an unspoken bubble that travels with us wherever we go. When this personal space is invaded, people often feel threatened and uncomfortable. When this invasion occurs, people usually send non-verbal red flags to the invader, cautioning them to step away. This need for personal space and control can elicit a strong innate response if threatened. There is no set distance for this personal space, and one's preference varies depending on gender, race, culture and the relationship between two individuals (Goar, 2009).

Articles used for this literature review were found using Southern Adventist University's McKee Library search engine, EBSCOhost, for psychology-based research. Keywords such as "non-verbal communication," "personal space," "perceived crowding," and "body language" were used when searching the databases. The following literature review describes the current research findings concerning personal space across gender, race and culture, as well as findings on nonverbal language and communication.

Personal Space Zones

There are four zones to personal space, all of which are based on distance: public, social, personal, and intimate (Goar, 2009). These zones vary slightly among cultures; the following

measures were taken from a Western society. When one is speaking in public, the range of distance between individuals is between 12 and 25 feet. When conversing with an acquaintance, the standard of distance ranges between four and 12 feet and defines the social zone. The level of comfort between friends, or the personal zone, is approximately two to four feet. The intimate zone is usually reserved for touching and flirting and ranges from six to 18 inches. A study conducted by Sinha and Nayyar (2000) showed that humans tend to require more personal space in the area in front of them than in the area behind or to the side of them. According to Goar (2009), there are eight dimensions that determine how we communicate with someone who enters our personal space. The eight dimensions are volume of voice, body heat, smell, eye contact, whether the relationship includes touching, if the space encourages positive interaction, gender position, and body position. These eight dimensions affect and determine the personal space zone people are most comfortable with during a social interaction.

Women and Personal Space

Gender directly affects how one person will react to another in terms of personal space. According to Goar (2009), African-American women do not seem to need a large personal space zone, and Hispanics tend to be more comfortable with standing and sitting near to each other.

Women in today's society often have their personal space invaded because women tend to present themselves as less aggressive (DeWelde, 2003). However, women can learn to reclaim their personal space. For example, women who took a self-defense course reported more power and confidence in their bodies; consequently, their presentation and attitude changed when they were approached. These women maintained their femininity while reclaiming their personal space by becoming more familiar and confident with their bodies (DeWelde, 2003). This may help women reclaim their lost personal space in society and also assist them in facilitating male attention. The effects of the invasion of women's personal space and their preferences require further empirical inquiry.

Gender Differences in Verbal and Non-verbal Communication

Many gender differences are present in verbal and non-verbal communication. Men tend to be less intimate, and they show more dominance and competitiveness (Blashill & Powlishta, 2009).

The female style of communication facilitates intimacy and cooperation. In an observational study, women were noted nodding and exhibiting back channel responses (short vocal responses that display attentiveness) many more times than men; therefore, women exhibited a more cooperative verbal and non-verbal language style, according to Western society standards (Helweg-Larsen, Cunningham, Carrico & Pergram, 2004). Women are more intimate in their communication and also tend to be more sensitive to non-verbal cues. In one experiment, women were negatively affected by a speaker's body language more significantly than men (Yesil, 2008). Goar (2009) states that although women tend to be more sensitive to these cues, men tend to perceive holding eye contact and physical touch as sexual attraction. This perspective can

cause men to misinterpret signals given by women, and men may not realize how threatening they seem. These gender differences can lead to miscommunication, both verbally and non-verbally, because men and women perceive the invasion of their personal space differently.

Race, Culture and Contact

According to Goar (2009), culture is a powerful indicator when measuring an individual's use of personal space. Latin and Eastern European cultures encourage touch within casual social situations, while Asian and North American cultures tend to shy away from contact. A study of personal space and culture conducted by Beaulieu (2004) found these contact cultures tend to have the smallest personal space zones, while non-contact cultures have the largest. American men tend to need a large personal space zone; however, research has indicated that British men exceed American men in their need for personal space. Participants in a study across cultures reacted more positively toward participants from the same culture than participants from a different area of the world (Goar, 2009).

Effects of Perceived Crowding

Space tends to influence people's behavior. If one's space becomes overcrowded, individuals may display negative behavior (Hall, Coats, & LeBeau, 2005). Studies on sociofugal and sociopetal spaces have found that as long as acceptable behavior is exhibited humans can live in high density spaces without showing signs of aggression (Carney, Hall, & Smith-LeBeau, 2005). A study on college students have found that students may study better when space appropriation is considered (Rioux, 2004). A study conducted on crowding effects among older generations found that participants who rated themselves with high social support rated their homes as being more relaxed and comfortable than participants who were rated with low social support (Sinha & Nayyar, 2000).

Crowding did not seem to negatively affect people as long as they were able to maintain their own personal space within the situation. However, when personal space is invaded, men tend to become more aggressive while women tend to become more passive (Goar, 2009). Knowledge of proxemics is more vital than culture or even gender differences, as an understanding of how we work in these situations contributes to our behavior. For example, the way classrooms are arranged for student learning and how architects design houses and cities have an influence on people's behavior (Burgess & Kaya, 2007).

Non-verbal Language and Communication

Goar (2009) states that "non-verbal communication is powerful because it seems to happen so automatically and feels so natural. But, in truth, the establishments of personal space, and its role in non-verbal communication, is a learned behavior" (p. 2). Not only does everyone in society rely on this form of communication, those who have speech problems tend to shift the majority of their communication to non-verbal language (Iacoboni, 2008). In fact, many scientists claim

that humans use nonverbal means of communication more often than verbal language (Yesil, 2008). Many of these measures include eye contact, hand gestures and other physical movements that can convey feeling and thoughts more effectively than verbal measures (DeRuiter, 2007). However, in order for non-verbal communication to be effective, it must be consistent and gestures must match verbal language (Hickson, Stacks, & Moore, 2004).

There are many factors relating to personal space invasion with the most influential factors being culture and the region of the social domain in which an individual was born (Goar, 2009). Within these categories are gender differences that affect the range of personal space zones. Women tend to be more passive and open to their personal space being invaded, while men tend to be more aggressive in higher populated proxemics. A high percentage of how we communicate is through non-verbal communication, and an understanding of gestures and facial expressions correlates with how well we communicate verbally and our use of personal space.

Critique of Research Literature

Race of participants was a limitation found in the research done by Helweg-Larsen, Cunningham, Carrico, and Pergram (2004) on the topic of nonverbal communication in male and female college students. Ninety-two percent of the students in the study were white, which may have prevented the results of the experiment to be an accurate presentation of the study body. Research conducted by Yesil (2008) was limited to Turkey, and because of the differences in culture that exist, results may not be relevant to Western societies such as North America. Future research should include college students and their individual needs of personal space since the area has not been extensively studied.

Many college students are unaware of the stress they may experience due to the invasion of their personal space. The purpose of this study is to measure the comfort level of college students relating to personal space, as well as differences across gender, ethnicity, age and academic standing. Research indicates that personal space is a powerful tool that psychologists keep in mind when designing classrooms and when measuring how good an environment is for learning. However, research needs to be conducted specifically on college students attending a small Christian university. Both the scientific community and students who attend private Christian universities may benefit from this research.

Definition of Terms

The following terms were operationally defined for this study:

1. Academic standing will be measured by participants' self-report of their classification as freshmen, sophomore, junior or senior on the *Crowe Survey of Personal Space*.
2. Ethnicity will be measure by participants' self-report of their being of White, Black, Asian, Hispanic, or Other origin (U.S. Census Bureau, 2008) on the *CSPS*.

3. Personal space is defined by the *CSPS*. Likert scale questions regarding comfort levels on personal space invasion and their satisfaction with an amount of personal space will be reported by the participants to determine the use of personal space among college students.

4. Use of personal space is defined as the preference or need for a specific amount of personal space.

Hypotheses

Two research hypotheses guided this study:

1. There are gender differences in the use of personal space among college students.
2. There are ethnic differences in the use of personal space among college students.

Each of these hypotheses will be tested in its null form.

Research Questions

Three research questions guided this study:

1. Is there a relationship between age and the need for a certain amount of personal space among college students?
2. Are there academic standing differences in the use of personal space among college students?
3. How satisfied are college students regarding the amount of personal space they receive?

Method

Participants

The sample of convenience consisted of 102 college students (58 male, 44 female) attending Southern Adventist University. Participants' age was indicted by a range from 18 to 25 or older ($M=1.43$, $SD=.50$). Participants' academic standing included Freshman, Sophomore, Junior and Senior (See Figure 1). The ethnic groups represented were White, Black, Asian, Hispanic and Other (See Figure 2). Participants filled out an informed consent form before receiving the *CSPS*. All participants were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct of the American Psychological Association (American Psychological Association, 2002).

Materials

The instrument used was the *Crowe Survey of Personal Space (CSPS)*. The *CSPS* is a 17-item instrument that measures demographics, and the relationship between age, gender, cultural background and academic standing, as well as how students feel about an invasion of their personal space. The first four questions are demographic. The remaining questions were

constructed by the researcher. Each question is measured on a Likert scale that measures the variable listed. Part two of the survey included five questions; the first two questions measure how often a participant feels their space is invaded by a member of the opposite sex and same sex. Another question asked participants how they feel about the invasion of their personal space by someone from a different ethnic background. The instrument continues with part three and four; all questions are answered on a Likert scale. Because this instrument was written by the researcher, the reliability and validity of this instrument has not yet been established (Cronbach's alpha .538).

Design and Procedure

This is a non-experimental comparative study using survey methodology. All participants were volunteers who were recruited between March 29 and April 1, 2010, on the campus of Southern Adventist University. Participants were recruited in the McKee Library as well as two history classes in which the professor granted permission. After students confirmed willingness to participate, they filled out an informed consent form and were given a survey. After the completed *CSPS* and informed consent form were received, they were put into separate folders to insure confidentiality. Completion of the survey took approximately five minutes.

Data Analysis

The completed *CSPS* surveys were scored and coded in accordance to the instrument key and entered into SPSS 17.0 for analysis. An independent samples t-test and a one-way ANOVA were used to test the null hypotheses. A Pearson's *r* correlational analysis and a one-way ANOVA were used to answer two of the research questions. The third question was answered by looking at the percentage of participants reporting satisfaction with their personal space.

Results

This study was comprised of 102 college students. Representation for academic standing was fairly balanced except for the seniors, which were not heavily represented (See Figure 1). Gender was nearly even with 58 male and 44 female participants. Regarding ethnicity, Whites represented 70% of the sample (See Figure 2).

Gender Differences

Use of Personal Space: Gender differences in the use of personal space were analyzed evaluating four null hypotheses. Independent samples t-tests were used to analyze the mean differences (See Table 5).

How Often Participants Feel Invaded: Female students reported feeling invaded more often than male students. ($M = 9.23$ and $M = 8.33$, respectively). However, an independent samples t-test analysis showed that this difference was not statistically significant ($t(100) = -1.29$, $p = .20$,

ns). Therefore the results regarding gender differences and how often participants felt invaded were inconclusive.

Close Proximity: Both male and female students reported feeling similar when their personal space is invaded ($M = 5.17$ and $M = 5.52$, respectively). An independent samples t-test analysis showed that this difference was not statistically significant ($t(100) = -.88$, $p = .38$, ns). The results regarding gender differences and how participants felt in sharing close proximity were inconclusive.

Greeting Opposite Gender: Male students reported feeling more comfortable with invading the space of members of the opposite gender than did female students. ($M = 4.53$ and $M = 5.75$, respectively). An independent samples t-test analysis showed that this difference was statistically significant ($t(100) = -2.66$, $p = .01$). The results indicate that male students reported being more comfortable with greeting an acquaintance of the opposite gender with a hug or a kiss than did female students.

Greeting Same Gender: Female students reported feeling more comfortable with invading the space of members of the same gender than did male students ($M = 5.05$ and $M = 6.17$, respectively). An independent samples t-test analysis showed that this difference was statistically significant ($t(100) = 2.79$, $p = .01$). The results indicate that female students reported being more comfortable with greeting an acquaintance of the same gender with a hug or a kiss than did male students.

Ethnic Differences in the use of Personal Space

Ethnic differences in the use of personal space were analyzed evaluating four null hypotheses. A one-way ANOVA was used to test this hypothesis in its null form (See Table 3).

How Often Participants Feel Invaded: Participants of Asian ethnicity reported feeling invaded the most ($M = 10$, $SD = 1.82$), followed by whites, blacks and Hispanics. However, these differences across ethnicity were not significant. There was a failure to reject the null hypothesis regarding the participants' report of how often they felt their space was invaded ($F(4, 96) = .26$, $p = .90$, ns). The results regarding ethnic differences and how often participants felt their personal space was invaded were inconclusive.

Close Proximity: Participants of Asian ethnicity reported feeling invaded slightly more often than any other ethnicity ($M = 5.75$, $SD = 1.26$) (See Table 3). There was a failure to reject the null hypothesis in the participants' report of how comfortable they felt sharing close proximities with other students ($F(4, 96) = .62$, $p = .64$, ns). The results were inconclusive regarding ethnic differences and how comfortable participants felt in sharing close proximities with other students.

Age and Personal Space

The research question regarding whether there is a relationship between age and the use of personal space among college students was answered using Pearson's r correlational analysis (See Table 1).

How Often Participants Feel Invaded: The results of the Pearson's r correlational analysis indicated that the difference across age and how often participants feel their personal space is invaded was not statistically significance ($r = -.08$, $p = .39$, ns). The results were inconclusive regarding age differences and how often participants felt their personal space was invaded.

Close Proximity: The results of the Pearson's r correlational analysis indicated that the difference across age and how comfortable participants felt in sharing close proximities with other students was not statistically significance ($r = .12$, $p = .65$, ns). The results were inconclusive regarding age differences in how comfortable participants felt in sharing close proximities with other students.

Academic Standing and Personal Space

The research question regarding whether there were differences in personal space use as a function of academic standing was answered by running a one-way ANOVA (See Table 4).

How Often Participants Feel Invaded: Juniors reported feeling slightly more invaded than other students ($M = 9.78$, $SD = 4.27$). However, the results of the one-way ANOVA indicate the difference across academic standing was not statistically significant ($F(3, 98) = 2.01$, $p = .11$, ns). The results were inconclusive regarding academic standing differences in regards to participants' report of personal space invasion.

Close Proximity: Seniors reported feeling slightly more uncomfortable with sharing close proximities with other students. The results of the one-way ANOVA indicated that there was statistical significance ($F(100) = 2.81$, $p = .04$). A Tukey HSD post hoc was run and a difference was found between sophomores and seniors ($M = -1.54$, $SD = .57$). The results suggest that the higher a student's academic standing, the more personal space they prefer.

Personal Space Satisfaction: The research question regarding how satisfied college students are with the amount of personal space they receive was answered by examining the percentage of participants reporting satisfaction. Descriptive statistics were run on the participants' report of personal space satisfaction ($M = 7.35$, $SD = 2.33$). The average participant reported 74% satisfaction with the amount of personal space they received while attending Southern Adventist University. Twenty-one participants (20.5%) were completely satisfied.

Other Interesting Findings

A serendipitous finding was the negative relationship between a participant's report of space satisfaction and how often they felt invaded ($r = -.31$, $p = .00$, $r^2 = .09$). The less a participant reported feeling invaded, the more space satisfaction they reported. About 9% of the variability in personal space satisfaction is related to how often a participant feels their space is invaded.

Discussion

The purpose of this study was to measure the use of personal space among college students across gender, ethnicity and academic standing differences. Two null hypotheses that guided this study stated that there would be no gender or ethnic differences in the use of personal space among college students.

The results showed that the higher a student's academic standing, the more personal space they preferred. However, the results indicated that there was no relationship between ethnicity and the use of personal space among college students. This result may have been affected by how heavily represented one ethnicity (white) was in the study. In regards to personal space satisfaction, the average participant was 74% satisfied. In the use of personal space among gender differences, male students reported being more comfortable with greeting an acquaintance of the opposite gender with a hug or a kiss than did female students. However, female students reported being more comfortable with greeting an acquaintance of the same gender with a hug or a kiss than did male students.

A limitation in this study includes the instrument used to measure personal space. The reliability and validity of *CSPS* instrument has not been tested. One weakness includes the participants' misunderstanding of how to answer the questions in the *CSPS*. Some participants indicated that each question depended on one's culture, so they answered the questions regarding how they felt a certain culture would respond, which did not necessarily correlate to the culture in which they were raised.

The results of this study were similar to the results of past research in regards to gender differences in the use of personal space. However, in this research study, ethnic differences were not found, due possibly to the small sample size. The results of this research may also improve interactions between students of the opposite gender. If students gain more knowledge on the use of personal space and nonverbal language with the opposite gender, this insight could improve verbal communication as well.

An agenda for future research should include a culture demographic so that participants may indicate if the culture they were raised in differs from their ethnicity. This could help with the confusion regarding questions on the *CSPS* referring to culture-sensitive greetings and the invasion of personal space.

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Appendix

Table 1
Correlation Matrix of Five Variables and Age (two-tailed)

Variable	1	2	3	4	5	6
1. How often Invaded	—	.03	.00	.42	.12	.39
2. Uncomfortable with Invasion		—	.80	.01	.00	.21
3. Space Satisfaction			—	.71	.24	.65
4. Same Gender				—	.051	.20
5. Opposite Gender					—	.60
6. Age						—

*p < .05

Table 2
Descriptive Statistics for Personal Space Variables

Measure	n	Min.	Max.	M	SD
1. How Often Invaded	102	5	24	8.72	3.49
2. Space Satisfaction	—	2	10	7.35	2.33
3. Uncomfortable with Invasion	—	—	—	5.32	1.98
4. Same Gender	—	—	—	5.69	2.08
5. Opposite Gender	—	—	—	5.06	2.35

Table 3
Descriptive Statistics for Ethnic Differences across Participants

Ethnicity	How Often Invaded			Close Proximities	
	N	M	SD	M	SD
White	72	8.79	3.82	5.39	2.05
Black	11	8.27	3.37	4.45	1.91
Asian	4	10.00	1.82	5.75	1.25
Hispanic	13	8.15	2.19	5.54	1.98
Other	1	9.00	—	5.00	—

Table 4
Descriptive Statistics for Academic Standing Differences across Participants

Academic Standing	How Often Invaded			Close Proximities	
	N	M	SD	M	SD
Freshmen	29	9.17	3.54	5.48	1.94
Sophomore	32	8.31	3.26	4.84	2.16
Junior	23	9.78	4.27	4.96	1.64
Senior	18	7.33	2.17	6.39	1.85

Table 5
Descriptive Statistics for Gender Differences across Participants

Measure	Male		Female	
	M	SD	M	SD
1. How Often Invaded	8.33	3.54	9.23	3.41
3. Close Proximity	5.17	1.88	5.52	2.11
4. Same Gender	6.17	1.95	5.05	2.10
5. Opposite Gender	4.53	2.44	5.75	2.05

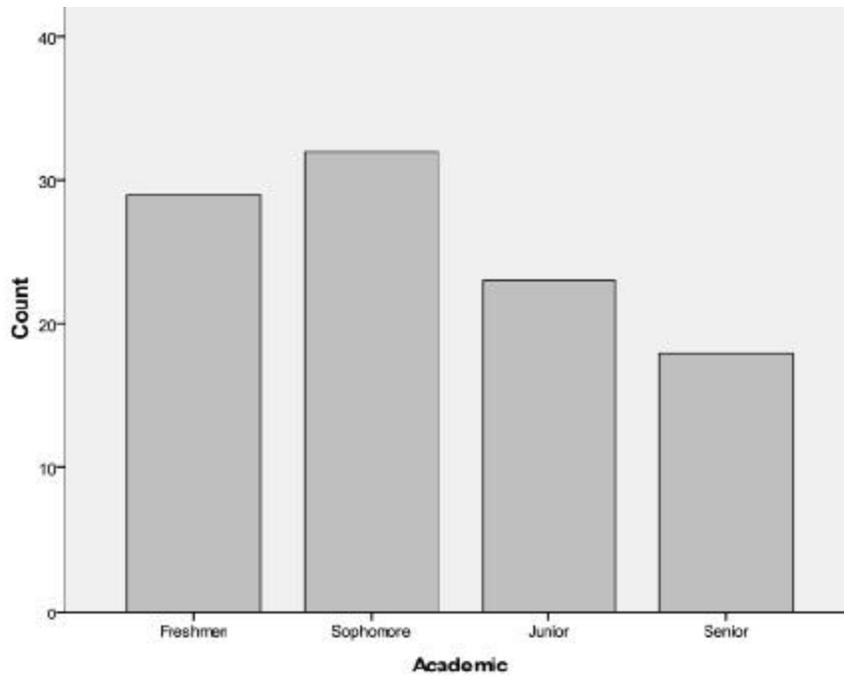


Figure 1. Bar Graph of Participant's Academic Standing.

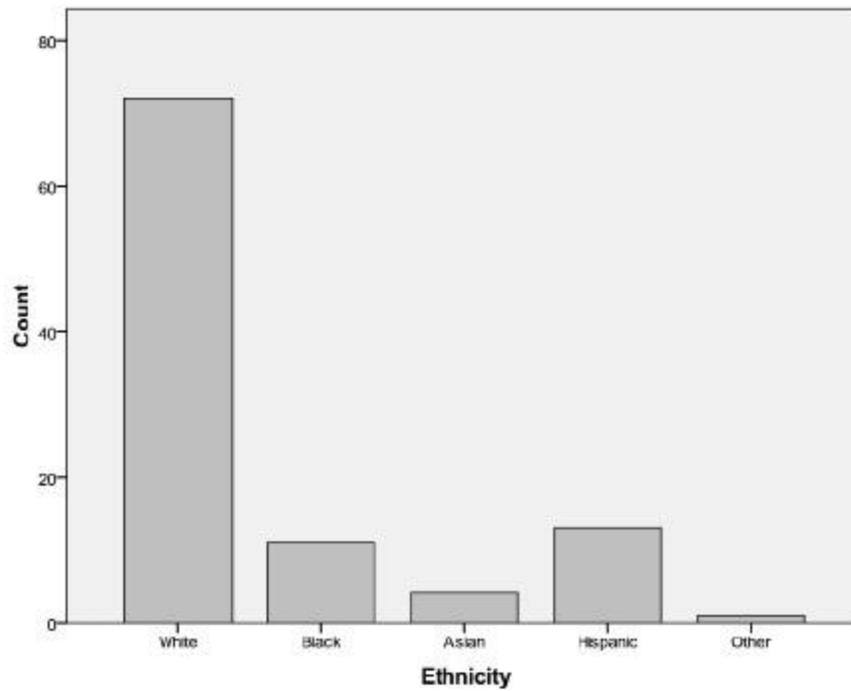


Figure 2. Bar Graph of Participant's Ethnicity.