



Appendix C
Student Paper (pp. 1a-18a) and Poster
(pp. 1b-18b) Examples

Running Head: GENDER AND ANGER RESEARCH

Testing the Contradiction Between Theory and Research on Gender's Role
in Anger Expression and Perception: Effects of Population Sampled

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Abstract

Gender differences in anger experience and expression have been proposed and explained by a number of psychological theories, yet current research seems to indicate few, if any, such differences. The purpose of this study was to identify potential causes of this discrepancy and to address the effect of population sampled as one possible cause for the apparent contradiction. Anger level, expression, and perception measures were taken of three populations: individuals currently undergoing counselling or psychiatric treatment, the general population, and undergraduate psychology students. Results showed that correlations between gender and all anger measure differed for all three populations, with the greatest difference being between the clinical and the university student populations. Additional problems in current research are identified, but not resolved. These include demand characteristics of the lab setting, and a reliance on self-report measures.

One need not look too far to realise that the theories and research on the role of gender in anger experience and expression are inconsistent and often contradictory. In his review of matter, Sharkin (1993) found that most theories concur with the lay opinion that men and women are different, if not opposite in emotion expression. Men have trouble exhibiting all emotions but anger, and “women are emotionally expressive, with the exception of anger” (p. 386). Yet he found that the research seems to show that “few significant gender differences with anger seem to exist” (p. 388). This difference may be reconcilable by studies which strive to correct for weaknesses in the current research.

One possible cause of this discrepancy was identified in a two part study by Biaggio (1989). For the first part, participants recorded all anger provoking incidents that they experienced over a two week period. They did so using an open-ended response survey, which was subsequently coded independently by two raters. Results of this study showed that men reported more anger provoking incidents, and more physical and verbal antagonism behaviour reactions than did women, and women reported more passive consent behaviour

reactions then did men. These results seem to contradict those of the second part of her study, in which a different sample from the same population read an insulting letter, and then complete the Novaco Anger Scale (NAS). No sex differences were found for any of the measures. Biaggio suggests that demand characteristics of the second setting may explain the difference. Whereas in the real-life setting women and men differ in the inhibition of their anger feelings, in the lab setting the women may feel more at ease in identifying and expressing their anger as it is “allowable,” even desirable, in this situation.

A second possible cause is research’s “overreliance on self-report measures, which are susceptible to socially desirable responses” (Sharkin, 1993, p. 388). One of the few studies successful in avoiding this problem was completed by Nunn and Thomas (1999) using a quasi-experimental design. With the help of a confederate, participants were angered, and the intensity of white noise subsequently administered by the participant was measured and employed as the operational definition of anger expression (the dependent variable). In this study, gender showed a significant relationship to anger expression, with men administering higher intensities of white noise than women.

Finally, Sharkin pointed to a third possible cause when he noted that “the theoretical views of female and male anger ... are based primarily on clinical work with clients” (p. 387). This is in contrast to the current research, which, as with much of psychological research, has predominantly relied on university student populations for their samples. While both of the studies mentioned above sample from these populations. Beverly Kooper brings all three problem together, providing us with two examples of studies which employ self-report measures to study undergraduate psychology students in a lab setting (Kooper, 1993; Kooper & Epperson, 1996). In both studies measures were taken from the large number of questionnaires participants completed. Neither study showed a relationship between gender and anger expression, with the exception of a moderate relationship between gender and aggressive acting out being demonstrated in the second.

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While few of the studies have drawn samples from outside of an undergraduate psychology course, and fewer still have studied samples taken from the general population, the study *Sex and gender role differences in anger: An Australian community study* (Milovchevich, Howells, Drew, & Day, 2001) would be a notable exception. Participants were asked to complete the two Trait-Anger subscales and the three Anger Expression subscales of the (STAXI), and to complete a Personal Description. They were then asked to read two scenarios in which a stranger (either male or female in both vignettes) “behaved in such a way that would be likely to produce anger in the participant” (p. 120), and to rate themselves on a number of items measuring their state anger, their state anger expression, and their state anger control. While their results did show that women were lower in trait anger and outward anger expression, and higher in anger control than men, these differences were not statistically significant.

Not surprisingly, results can vary drastically between populations sampled. Suter, Byrne, Byrne, Howells, and Day (2002) took their samples from Australian prison populations. Using the State Trait Anger Expression Inventory (STAXI) and the Novaco Anger Scale (NAS), and in a clear contradiction to the theories of gender and anger, they found that women scored higher on all measures of anger with the exception of anger control, for which the men scored significantly higher.

Buntaine and Costenbade (1997) had fourth and fifth grade students complete self-report anger questionnaire. Of the ten anger provoking scenarios for which participants were asked to rank their anger level, significant gender differences were only for two. Males indicated higher anger levels for one, while females did so for the other. If gender differences in anger experience and expression are in fact related to mental health (which is one possible explanation for the seemingly greater differences observed in clinical populations), this could be consistent with the statement by Barrett and White (2002) that it isn't until later, in adolescence that “gender differences in mental health emerge and gender becomes a more

salient factor” (p. 451). Gender differences in anger expression did emerge, with males reported more use of physical aggression as an expression of anger, and females reported more sulking and pouting.

No conclusions regarding gender differences in the experience and expression of anger can be made until the effects of setting, self-report measures, and population are studied. By sampling from three distinct populations, this study attempts to address one of these issues. Researchers hypothesised that greater gender differences in anger would be found in the sample of individuals currently undergoing counselling or psychiatric treatment than in the sample of university students, as the theories have predominantly been based on observations of clinical populations, and the research, from university populations.

Method

Population

Samples were drawn from three populations. The first sample was drawn from a population of individuals undergoing treatment for mental health issues. This was done using a stratified random sample design in which there was two levels of strata. The first level was the treatment clinician, the second being the gender of the individual. For this study, four patients (two men and two women), from four randomly selected clinicians were sampled. The second sample was collected from a population of undergraduate psychology students. Of the 20 students approached, 18 (7 men and 11 women) agreed to participate in the study. The final sample was drawn from the general population, using census data. Of the 40 individuals contacted, 14 (six men and eight women) agreed to participate in the study. Analysis of the demographic data demonstrated that this sample was consistent with the general population. This population was sampled because it is the population that the majority of both psychological research and theory is attempting to describe. Demographic characteristics of the three samples differed significantly on measures such as age, education level, marital status, race, and income. As this study did not seek to explain the causes for any differences

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in anger expression between the populations, the dissimilarity between the populations on these dimensions was not considered relevant. Conversely, demographic characteristics of the three samples were very similar to the populations they were used to represent, with no significant differences on any dimension. Establishing that the samples truly reflected their populations was vital to confirming the representativeness of the sample.

Measures

The Demographic Information Questionnaire collected such information as gender, age, race, marital status, income and education level. This information, with the exception of gender, was collected solely to determine representativeness of the samples.

The Anger Level Questionnaire is a questionnaire, designed by the researcher, consisting of ten short scenarios, which would be expected to cause varying degrees of anger in the subject. The order that the items were presented was counterbalanced to control for practice effects. In the cases in which the actions of an other are involved, the gender of the individual was not identified. A number of these scenarios were adopted from items that Evans and Strangeland (1971) identified to be anger provoking. Table 1 provides a list of the situation presented each of the scenarios.

After each scenario is read, the participants were asked to rate the level of anger they would experience by circling the appropriate number on a ten-point scale, (1) not at all bothered, to (10) blind rage, and to write a short paragraph in the space provided indicating what their response behaviour would be.

At a later date, two experimenters, kept blind to the sex of the participant, coded the behaviour responses for type (verbal aggression, physical aggression, suppression, talk, sulk/pout, and cry) and level (mild, moderate, or high). Inter-experimenter agreement measures were taken to determine the consistency of this coding, which proved high.

The Anger Perception Questionnaire consists of ten short films (thirty seconds to one minute each) in which an actor displays various anger behaviours of differing intensities and

types, and corresponding questionnaire booklet. These ten displays represented five levels of anger, each display was be filmed twice, once using a female actor and once using a male actor, and the two groupings were divided so as to have the equivalent displays with opposite genders (see table 2 below). The method of filming and selecting the films was adapted from that used by Wallbott (1995) in his study, *Bodily Expressions of Emotion*. The order of the films was counterbalanced control for practice effects.

After watching each of the ten films, the participant was asked to rate, on the corresponding page of the questionnaire, the anger level displayed by the actor (by circling the appropriate number on a ten-point scale, (1) not at all bothered, to (10) blind rage), and the appropriateness of the reaction to each of the ten scenarios presented in part one. The rating of appropriateness was done on a seven point scale. Numbers (1) through (3) indicated too little of a reaction, with (1) signifying “absolutely inappropriate in this situation,” number (4) indicated “absolutely appropriate in this situation, and numbers (5) through (7) indicated too great of a reaction, with (7) signifying “absolutely inappropriate in this situation”

Procedures

Potential participants were initially contacted by letter, with a follow-up telephone call one week later. In both cases they were told of the study, its intent of studying anger experience and expression, the importance of their participant, and assured of complete confidentiality. For those who agreed to participate, a mutually convenient day and time was arranged for them to the university to complete the study. At the university they assurances of confidentiality were reiterated, and more detailed explanations of the procedures were given. Participants then signed an informed consent form, and were led to a small room adjoining the researcher’s office to complete the demographic questionnaire and the two parts of the study. The door between the rooms was left open to facilitate the asking of questions, but the activities of the research were not in view, to minimize distractions.

Part 1: Participants were given two booklets, one containing the demographic questionnaire and the other containing the anger level questionnaire. They were told to complete the demographic questionnaire first, then put it aside and complete the anger level questionnaire. Instructions for each questionnaire were included on a separate sheet of paper inserted as the first page of each booklet. Participants were reminded that the study depended on them answering as accurately as possible. Upon completion of both booklets, participants returned them to the researcher, and proceeded to part two of the study.

Part 2: Following completion of part one, participants were given the Anger Perception Questionnaire booklet, and the film was played on a computer already set up on the desk in the study room. Simple controls allowed the participant to repeat the anger display just seen, and to proceed to the next anger display. Participants were not able to return to a previously seen anger display, as this may have affected the counterbalanced order of the displays.

Following completion of the second part of the study, the participant returned the questionnaire, were thanked, provided with the opportunity to ask any questions about the study, and reassured of the confidentiality of their responses. On average the study took two hours to complete. In order to assure confidentiality, a number code on the confidentiality form, and completed questionnaires was used to keep identifying information, such as name and address, separate, at all times, from all other information collected.

Results

A 2 (gender) by 3 (population) complex design was employed for the analysis of the data. When all populations were considered together, gender was found to have a moderate relationship to anger level ($r = 0.415$, $p < 0.01$), with men reporting greater anger levels than women. When the populations were analysed independently, this relationship proved only significant for the clinical population ($r = 0.587$, $p < 0.05$). There was no significant relationship between population and anger level. Table 3 displays the correlation coefficients for the association of gender with reported anger level and resultant behaviours.

Moderate to strong negative relationships were found between reported anger levels of the participants and their rating of the anger level of the actors ($r = -0.771$, $p < 0.01$), and reported anger level of the participants and their rating of the appropriateness of the actors anger behaviour ($r = -0.793$, $p < 0.01$). Table 4 displays the correlation coefficients for the association of reported anger level with resultant anger behaviours, reported anger level of actor, and perceived appropriateness of actor's anger behaviour.

Discussion

Results of this study confirm the hypothesis that clinical populations currently undergoing counselling or psychiatric treatment differ significantly from both university student populations and the general population, and specifically that they show greater gender differences in self-reported anger level and behavioural expression.

The correlations between gender and the various anger factors (level, reaction behaviours, and perceptions) for the general population sample were not consistently similar to those of either the clinical, or the university population samples'. Generally, those for the general population figured somewhere between the two others, with the notable exception of the correlation between gender with the reaction behaviour of talking through the anger being strong for the general population sample, but weak and weak to moderate for the university student population sample and the clinical sample, respectively.

This research lends support to the idea that the "theories of anger as a function of gender have not really been tested" (Sharkin, 1993, p. 387), but, as this research limited itself to the role of population studied, further work is required before the correctness of the current theories can be judged. The validity of the lab setting and self-report measures for research into gender differences in anger level and expression, and the degree to which they can be generalized to real world settings, must first be determined.

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Table 1: Situations Identified by Scenario, for which Resultant Anger Level was Measured.

Scenario	Situation
1	Locking your keys in your car.
2	Finding out your significant other has cheated on you.
3	Being stuck in traffic when already late.
4	Paying a service person to repair an item only to have the same problem occur the next time it's used.
5	Having your wallet stolen.
6	Being insulted during a meeting.
7	Having a co-worker take credit for work you did.
8	Not being invited to a close friend's party.
9	Being physically assaulted.
10	Being blamed for something you did not do.

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Table 2: Grouping of Anger Displays and Sex of Actor

Anger Display	Mild		Mild-Moderate		Moderate		Moderate-High		High	
	1	2	1	2	1	2	1	2	1	2
Group 1	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Group 2	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male

Table 3: Correlation of Gender with Reported Anger Level, and Resultant Behaviours, for All Populations, Population 1, 2, and 3 Independent of Each Other

Population	Anger	Verbal	Physical	Suppression	Talk Out	Sulk / Pout	Cry
All	-0.415**	-0.530**	-0.730**	0.732**	0.397**	0.724**	0.860**
1	-0.587*	-0.963**	-0.907**	0.932**	0.563*	0.903**	0.956**
2	-0.123	-0.077	-0.560*	-0.465	0.349	0.493	0.803**
3	-0.519	-0.623*	-0.719**	0.759**	0.805**	0.736**	0.915**

* $p < 0.05$

** $p < 0.01$

Population 1: Individuals undergoing treatment for mental health issues (N = 16).

Population 2: Undergraduate psychology students (N = 18).

Population 3: General population (N = 14).

Anger: Average anger level of participant, as caused by scenarios presented in part one.

Verbal: Verbal aggression as a behavioural response.

Physical: Physical aggression as a behavioural response.

Suppression: Anger suppression as a behavioural response.

Talk out: Talking through anger as a behavioural response.

Sulk / Pout: Sulking or pouting as a behavioural response

Cry: Crying as a behavioural response

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Table 4: Correlation of Reported Anger Level with Resultant Anger Behaviours, for All Populations, Population 1, 2, and 3 Independent of Each Other

Population	Verbal	Physical	Suppression	Talk Out	Sulk	Cry	Film Anger	Appropriate
All	0.523**	0.571**	-0.367*	-0.191	-0.406**	-0.532**	-0.771**	-0.793**
1	0.661**	0.738**	-0.397	-0.614 *	-0.647**	-0.660**	-0.774**	0.848**
2	-0.050	-0.091	-0.220	0.328	0.264	-0.234	-0.926**	-0.929**
3	0.640*	-0.433	-0.366	-0.682**	-0.239	-0.296	-0.851**	-0.871**

* p < 0.05

** p < 0.01

Population 1: Individuals undergoing treatment for mental health issues (N = 16).

Population 2: Undergraduate psychology students (N = 18).

Population 3: General population (N = 14).

Anger: Average anger level of participant, as caused by scenarios presented in part one.

Verbal: Verbal aggression as a behavioural response.

Physical: Physical aggression as a behavioural response.

Suppression: Anger suppression as a behavioural response.

Talk out: Talking through anger as a behavioural response.

Sulk / Pout: Sulking or pouting as a behavioural response

Cry: Crying as a behavioural response

Film anger: Participant's rating of the average anger level of actors.

Appropriateness: Participant's rating of average appropriateness of actor's anger behaviour.

Notes

Testing the Contradiction Between Theory and Research on Gender's Role

in Anger Expression and Perception: Effects of Population Sampled

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Abstract

Gender differences in anger experience and expression have been proposed and explained by a number of psychological theories, yet current research seems to indicate few, if any, such differences. The purpose of this study was to identify potential causes of this discrepancy and to address the effect of population sampled as one possible cause for the apparent contradiction. Anger level, expression, and perception measures were taken of three populations: individuals undergoing counselling or psychiatric treatment, undergraduate psychology students, and the general population. Results showed that correlations between gender and all anger measure differed for each of the three populations, with the greatest difference being between the clinical and university student populations.

Introduction

Most theories on gender differences in anger concur with the lay opinion that men have trouble exhibiting all emotions but anger, and “women are emotionally expressive, with the exception of anger” (Sharkin, 1993, p. 386). Yet the research seems to show that “few significant gender differences with anger seem to exist” (p. 388).

Three possible causes for this discrepancy have been identified:

- **Demand characteristics of the lab setting:** Whereas in the real-life setting women and men differ in the inhibition of their anger feelings, in the lab setting the women may feel more at ease in identifying and expressing their anger as it is “allowable,” even desirable, in this situation (Biaggio, 1989).
- **Self-report measures:** The majority of studies employ questionnaires, surveys, and other self-report measure, which are “susceptible to socially desirable responses” (Sharkin, 1993, p. 388). In contrast, when

an actual anger reactions was studied by Nunn and Thomas (1999), gender showed a significant relationship to anger expression, with men rating higher than women.

- **Population sampled:** “The theoretical views of female and male anger ... are based primarily on clinical work with clients” (p. 387). This is in contrast to the current research, which, as with much of psychological research, has predominantly relied on university student populations for their samples.
 - Population can have a profound effect on observed gender differences in anger, from finding that females rate higher on all measure of anger with the exception of anger control by sampling prison populations (Suter, Byrne, Byrne, Howells, & Day, 2002), to with males rating higher in physical aggression, and females rating higher in sulking and pouting as a means of anger expression by sampling school aged children (Buntaine & Costenbade 1997), to no

significant differences between the genders (Milovchevich, Howells, Drew, & Day, 2001).

Hypothesis: Greater gender differences in anger exist in populations currently undergoing counselling or psychiatric treatment than do in university student populations.

Method

- **Population 1:** A stratified-random sample was drawn from a population of individuals undergoing treatment for mental health issues. N = 16 (8 men, 8 women)
 - **Population 2:** A random sample was drawn from a population of undergraduate psychology students. N = 18 (7 men, 11 women)
 - **Population 3:** A random sample was drawn from the general population. N = 14 (6 men, 8 women). This population was sampled because it is the population that the majority of both psychological research and theory is attempting to describe.
- Demographic characteristics of the three samples differed significantly on measures such as age, education level, marital status, race, and income. As this study did not seek to explain the causes for any differences in anger expression between the populations, the dissimilarity between the populations on these dimensions was not considered relevant.

- Demographic characteristics of the three samples had no significant differences, on any dimension, from the populations they were used to represent.
- The participants from all three populations complete each of the following, under the same conditions:
 - The **Demographic Information Questionnaire** collected such information as gender, age, race, marital status, income and education level.
 - The **Anger Level Questionnaire** consisting of ten short scenarios, which would be expected to cause varying degrees of anger in the subject.
 - After each scenario is read, the participants were asked to rate the level of anger they would experience, and to write a short paragraph in the space provided indicating what their response behaviour would be.

- The **Anger Perception Questionnaire** consisting of ten short films in which an actor displays various anger behaviours of differing intensities and types.
 - After watching each of the ten films, the participant was asked to rate, in the corresponding questionnaire, the anger level displayed by the actor, and the appropriateness of the reaction to each of the ten scenarios presented in the Anger Level Questionnaire.

Results

Anger Level

- All populations considered together: gender was found to have a moderate relationship to anger level ($r = 0.415$, $p < 0.01$), with men ($M_M = 56.905$) reporting greater anger levels than women ($M_F = 53.407$).
- Populations analysed independently: neither the results for the university student population, nor the general population showed a significant relationship between gender and anger level. The clinical sample showed a moderate relationship between the variables ($r = 0.587$, $p < 0.05$).
- There was no significant relationship between population and anger level.

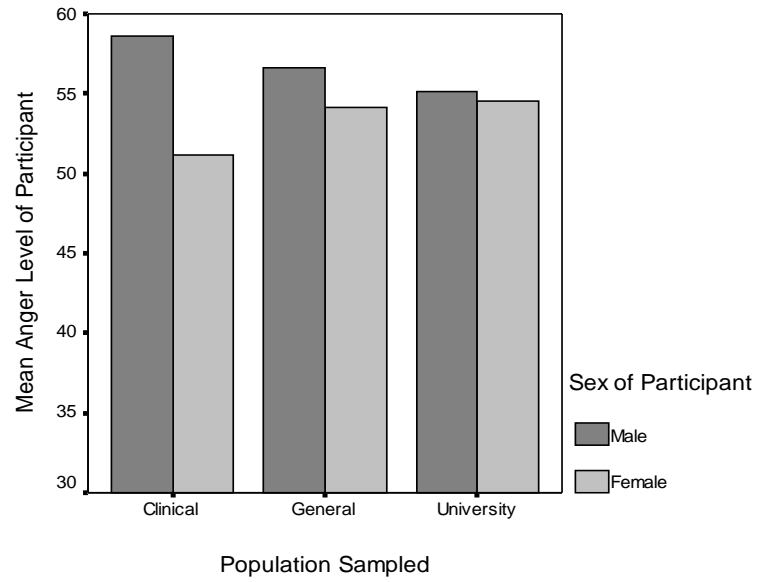


Figure 1: Mean Anger Level of Males and Females of Clinical ($M_M = 58.6$, $M_F = 51.1$), General ($M_M = 56.7$, $M_F = 54.1$), and University ($M_M = 55.1$, $M_F = 54.6$) Populations.

Anger Expression

- All populations considered together: significant gender differences in anger expression were found for all behaviours. These relationships ranged in strength from weak (talk out) or weak-moderate (verbal aggression), to strong (cry). All other relationships were strong-moderate.
- Population sampled showed moderate relationships with verbal aggression and talking out anger. It had no significant relationship with the other anger behaviours.

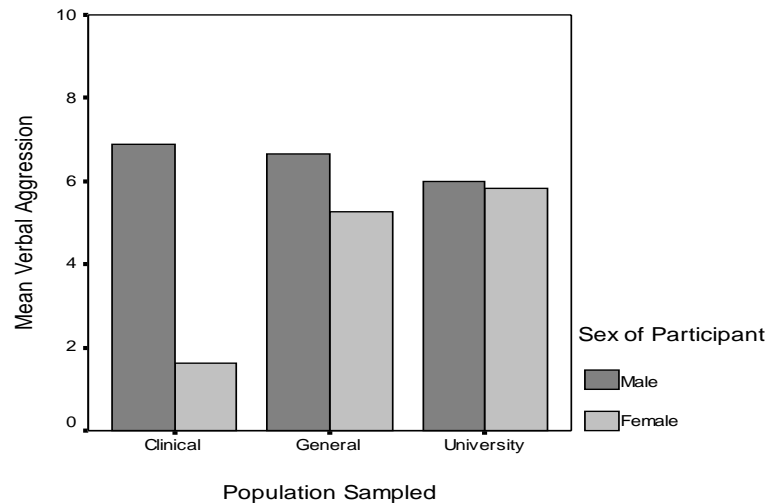


Figure 2: Mean Verbal Aggression of Males and Females of Clinical ($M_M = 6.9$, $M_F = 1.6$), General ($M_M = 6.7$, $M_F = 5.3$), and University ($M_M = 6.0$, $M_F = 5.8$) Populations

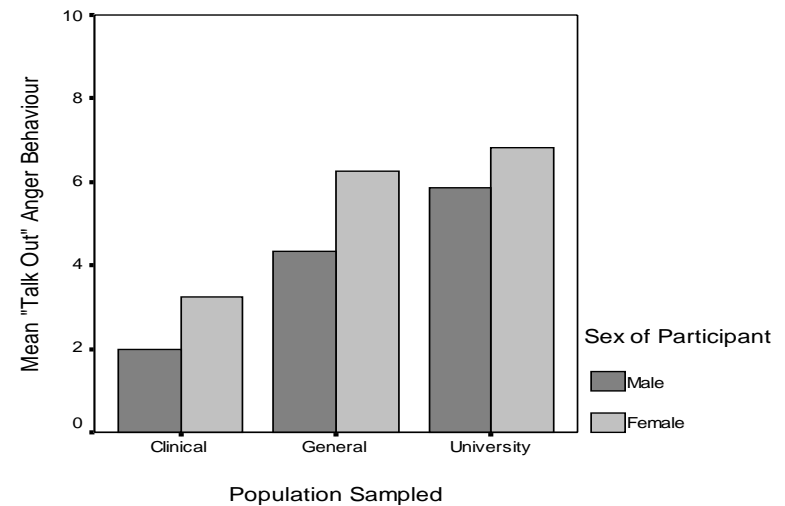


Figure 3: Mean "Talking Out" of Males and Females of Clinical ($M_M = 2.0$, $M_F = 3.3$), General ($M_M = 4.3$, $M_F = 6.3$), and University ($M_M = 5.9$, $M_F = 6.8$) Populations

Anger Perception

- Moderate to strong negative relationships were found between reported anger levels of the participants and their rating of the anger level of the actors ($r = -0.771$, $p < 0.01$).
- Moderate to strong negative relationships were found between reported anger levels of the participants and their rating of the appropriateness of the actors anger behaviour ($r = -0.793$, $p < 0.01$).

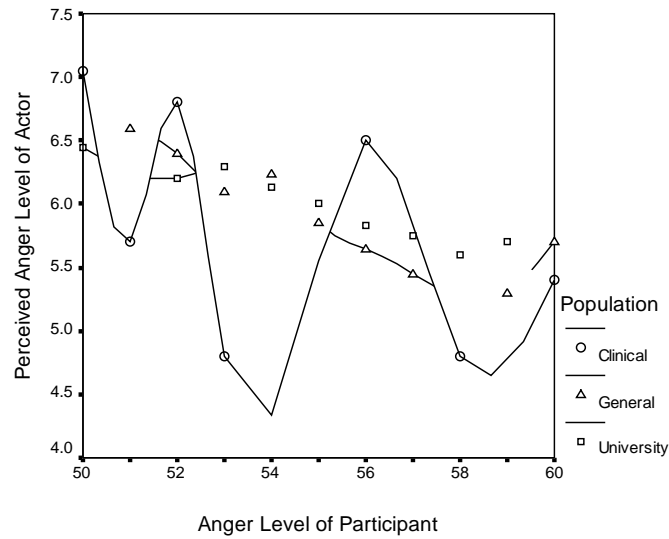


Figure 4: Variation of Perceived Anger Level of Actor as a Function of Anger Level of Participant, of Clinical, General, and University Populations.

Table 1: Mean Anger Perception Ratings of Males and Females of Clinical, General, University, and All Populations. (Numbers in italic signify that no significant relationship was reported for these variables).

Population	Film Anger		Appropriateness	
	Men	Women	Men	Women
All	5.38	6.352	3.63	4.505
Clinical	4.48	6.975	2.86	5.143
General	5.51	6.200	4.02	4.270
University	<i>6.00</i>	<i>6.009</i>	<i>4.18</i>	<i>4.213</i>

Conclusions

- Results of this study confirm the hypothesis that clinical populations currently undergoing counselling or psychiatric treatment differ significantly from both university student populations and the general population, and specifically that they show greater gender differences in self-reported anger level and behavioural expression.
- The correlations between gender and the various anger factors (level, reaction behaviours, and perceptions) for the general population sample were not consistently similar to those of either the clinical, or the university population samples'.
 - Generally, those for the general population figured somewhere between the two others, with the notable exception of the correlation between gender with the reaction behaviour of talking through the anger being strong for the general population sample, but weak and weak to moderate for the university student population sample and the clinical sample, respectively.

- Implications of these findings are that neither the current theories of gender differences in anger experience and expression, nor the current research, are truly representative of the general public.
- This research lends support to the idea that the “theories of anger as a function of gender have not really been tested” (Sharkin, 1993, p. 387), but, as this research limited itself to the role of population studied, further work is required before the correctness of the current theories can be judged.
 - The validity of the lab setting and self-report measures for research into gender differences in anger level and expression, and the degree to which they can be generalized to real world settings, must first be determined.

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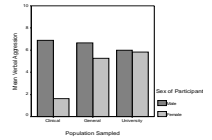
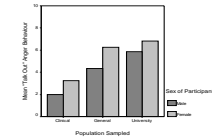
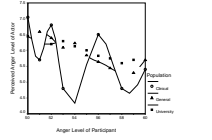
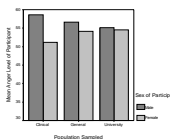
Sharkin, B. S. (1993). Gender and anger: Theory, research and implications. *Journal of counseling and development, 71*, 386-389.

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Testing the Contradiction Between Theory and Research on Gender's Role in Anger Expression and Perception: Effects of Population Sampled

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Abstract	Method	Anger Expression																														
<p>Gender differences in anger experience and expression have been proposed and explained by a number of psychological theories, yet current research seems to indicate few, if any, such differences. The purpose of this study was to identify potential causes of this discrepancy and to address the effect of population sampled as one possible cause for the apparent contradiction. Anger level, expression, and perception measures were taken of three populations: individuals undergoing counselling or psychiatric treatment, undergraduate psychology students, and the general population. Results showed that correlations between gender and all anger measure differed for each of the three populations, with the greatest difference being between the clinical and university student populations.</p>	<p>Method</p> <ul style="list-style-type: none"> Population 1: A stratified-random sample was drawn from a population of individuals undergoing treatment for mental health issues. N = 16 (8 men, 8 women) Population 2: A random sample was drawn from a population of undergraduate psychology students. N = 18 (7 men, 11 women) Population 3: A random sample was drawn from the general population. N = 14 (6 men, 8 women). This population was sampled because it is the population that the majority of both psychological research and theory is attempting to describe. <ul style="list-style-type: none"> Demographic characteristics of the three samples differed significantly on measures such as age, education level, marital status, race, and income. As this study did not seek to explain the causes for any differences in anger expression between the populations, the dissimilarity between the populations on these dimensions was not considered relevant. Demographic characteristics of the three samples had no significant differences, on any dimension, from the populations they were used to represent. 	<p>Anger Expression</p> <ul style="list-style-type: none"> All populations considered together: significant gender differences in anger expression were found for all behaviours. These relationships ranged in strength from weak (talk out) or weak-moderate (verbal aggression), to strong (cry). All other relationships were strong-moderate. Population sampled showed moderate relationships with verbal aggression and talking out anger. It had no significant relationship with the other anger behaviours.   <p>Figure 2: Mean Verbal Aggression of Males and Females of Clinical ($M_M = 6.8, M_F = 1.6$), General ($M_M = 6.7, M_F = 5.3$), and University ($M_M = 6.0, M_F = 5.5$) Populations</p> <p>Figure 3: Mean "Talking Out" of Males and Females of Clinical ($M_M = 2.0, M_F = 3.3$), General ($M_M = 4.3, M_F = 6.3$), and University ($M_M = 5.9, M_F = 6.8$) Populations</p>	<ul style="list-style-type: none"> Implications of these findings are that neither the current theories of gender differences in anger experience and expression, nor the current research, are truly representative of the general public. This research lends support to the idea that the "theories of anger as a function of gender have not really been tested" (Sharkin, 1993, p. 387), but, as this research limited itself to the role of population studied, further work is required before the correctness of the current theories can be judged. <ul style="list-style-type: none"> The validity of the lab setting and self-report measures for research into gender differences in anger level and expression, and the degree to which they can be generalized to real world settings, must first be determined. 																													
<p>Most theories on gender differences in anger concur with the lay opinion that men have trouble exhibiting all emotions but anger, and "women are emotionally expressive, with the exception of anger" (Sharkin, 1993, p. 386). Yet the research seems to show that "few significant gender differences with anger seem to exist" (p. 388).</p> <p>Three possible causes for this discrepancy have been identified:</p> <ul style="list-style-type: none"> Demand characteristics of the lab setting: Whereas in the real-life setting women and men differ in the inhibition of their anger feelings, in the lab setting the women may feel more at ease in identifying and expressing their anger as it is "allowable," even desirable, in this situation (Biaggio, 1989). Self-report measures: The majority of studies employ questionnaires, surveys, and other self-report measures, which are "susceptible to socially desirable responses" (Sharkin, 1993, p. 388). In contrast, when an actual anger reactions was studied by Nunn and Thomas (1999), gender showed a significant relationship to anger expression, with men rating higher than women. 	<p>Introduction</p> <ul style="list-style-type: none"> The participants from all three populations complete each of the following, under the same conditions: <ul style="list-style-type: none"> The Demographic Information Questionnaire collected such information as gender, age, race, marital status, income and education level. The Anger Level Questionnaire consisting of ten short scenarios, which would be expected to cause varying degrees of anger in the subject. <ul style="list-style-type: none"> After each scenario is read, the participants were asked to rate the level of anger they would experience, and to write a short paragraph in the space provided indicating what their response behaviour would be. The Anger Perception Questionnaire consisting of ten short films in which an actor displays various anger behaviours of differing intensities and types. <ul style="list-style-type: none"> After watching each of the ten films, the participant was asked to rate, in the corresponding questionnaire, the anger level displayed by the actor, and the appropriateness of the reaction to each of the ten scenarios presented in the Anger Level Questionnaire. 	<p>Anger Perception</p> <ul style="list-style-type: none"> Moderate to strong negative relationships were found between reported anger levels of the participants and their rating of the anger level of the actors ($r = -0.771, p < 0.01$). Moderate to strong negative relationships were found between reported anger levels of the participants and their rating of the appropriateness of the actors anger behaviour ($r = -0.793, p < 0.01$).  <p>Table 1: Mean Anger Perception Ratings of Males and Females of Clinical, General, University, and All Populations. (Numbers in <i>italic</i> signify that no significant relationship was reported for these variables)</p> <table border="1" data-bbox="1291 982 1522 1063"> <thead> <tr> <th rowspan="2">Popula- tion</th> <th colspan="2">Film</th> <th colspan="2">Appropriat</th> </tr> <tr> <th>M</th> <th>W</th> <th>M</th> <th>W</th> </tr> </thead> <tbody> <tr> <td>All</td> <td>5</td> <td><i>6</i></td> <td><i>3</i></td> <td><i>4</i></td> </tr> <tr> <td>Clinica</td> <td>4</td> <td><i>6</i></td> <td><i>2</i></td> <td><i>5</i></td> </tr> <tr> <td>Gener</td> <td>5</td> <td><i>6</i></td> <td><i>4</i></td> <td><i>4</i></td> </tr> <tr> <td>Univer</td> <td>6</td> <td><i>6</i></td> <td><i>4</i></td> <td><i>4</i></td> </tr> </tbody> </table> <p>Figure 4: Validation of Perceived Anger Level of Actor as a Function of Anger Level of Participant, of Clinical, General, and University Populations.</p>	Popula- tion	Film		Appropriat		M	W	M	W	All	5	<i>6</i>	<i>3</i>	<i>4</i>	Clinica	4	<i>6</i>	<i>2</i>	<i>5</i>	Gener	5	<i>6</i>	<i>4</i>	<i>4</i>	Univer	6	<i>6</i>	<i>4</i>	<i>4</i>	<p>References</p> <p>Barrett, A. E. & White, H. R. (2002). Trajectories of gender role orientations in adolescence and early adulthood: A prospective study of the mental health effects of masculinity and femininity. <i>Journal of health and social behavior, 43</i> (4), 451-468.</p> <p>Biaggio, M. K. (1989). Sex differences in behavioural reactions to provocation of anger. <i>Psychological reports, 64</i>, 23-26.</p> <p>Buntaine, R. L. & Costenbader, V. K. (1997). Self-reported differences in the experience and expression of anger between girls and boys. <i>Sex roles, 36</i>(9/10), 625-637.</p> <p>Evans, D. R. & Stangeland, M. (1971). Development of the reaction inventory to measure anger. <i>Psychological reports, 29</i>, 412-414.</p> <p>Kooper, B. A. (1993). Role of gender, sex role identity, and type A behavior in anger expression and mental health functioning. <i>Journal of counseling psychology, 40</i>(2), 232-237.</p>
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Univer	6	<i>6</i>	<i>4</i>	<i>4</i>																												
<ul style="list-style-type: none"> Population sampled: "The theoretical views of female and male anger... are based primarily on clinical work with clients" (p. 387). This is in contrast to the current research, which, as with much of psychological research, has predominantly relied on university student populations for their samples. <ul style="list-style-type: none"> Population can have a profound effect on observed gender differences in anger, from finding that females rate higher on all measure of anger with the exception of anger control by sampling prison populations (Suter, Byrne, Howells, & Day, 2002), to with males rating higher in physical aggression, and females rating higher in sulking and pouting as a means of anger expression by sampling school aged children (Buntaine & Costenbade 1997), to no significant differences between the genders (Milovchevich, Howells, Drew, & Day, 2001). Hypothesis: Greater gender differences in anger exist in populations currently undergoing counselling or psychiatric treatment than do in university student populations. 	<p>Results</p> <p>Anger Level</p> <ul style="list-style-type: none"> All populations considered together: gender was found to have a moderate relationship to anger level ($r = 0.415, p < 0.01$), with men ($MM = 56.905$) reporting greater anger levels than women ($MF = 53.407$). Populations analysed independently: neither the results for the university student population, nor the general population showed a significant relationship between gender and anger level. The clinical sample showed a moderate relationship between the variables ($r = 0.587, p < 0.05$). There was no significant relationship between population and anger level.  <p>Figure 1: Mean Anger Level of Males and Females of Clinical ($M_M = 56.6, M_F = 51.1$), General ($M_M = 52.7, M_F = 54.1$), and University ($M_M = 55.1, M_F = 54.6$) Populations.</p>	<p>Conclusions</p> <ul style="list-style-type: none"> Results of this study confirm the hypothesis that clinical populations currently undergoing counselling or psychiatric treatment differ significantly from both university student populations and the general population, and specifically that they show greater gender differences in self-reported anger level and behavioural expression. The correlations between gender and the various anger factors (level, reaction behaviours, and perceptions) for the general population sample were not consistently similar to those of either the clinical, or the university population samples. <ul style="list-style-type: none"> Generally, those for the general population figured somewhere between the two others, with the notable exception of the correlation between gender with the reaction behaviour of talking through the anger being strong for the general population sample, but weak and weak to moderate for the university student population sample and the clinical sample, respectively. 	<p>Kooper, B. A. & Epperson, D. L. (1996). The experience and expression of anger: Relationships with gender, gender role socialization, depression, and mental health functioning. <i>Journal of counseling psychology, 43</i>(2), 158-165.</p> <p>Milovchevich, D., Howells, K., Drew, N., & Day, A. (2001). Sex and gender role differences in anger: An Australian community study. <i>Personality and individual difference, 31</i>, 117-127.</p> <p>Nunn, J. S. & Thomas, S. L. (1999). The angry male and the passive female: The role of gender and self-esteem in anger expression. <i>Social behaviour and personality, 27</i>(2), 145-154.</p> <p>Sharkin, B. S. (1993). Gender and anger: Theory, research and implications. <i>Journal of counseling and development, 71</i>, 386-389.</p> <p>Suter, J. M., Byrne, M. K., Byrne, S., Howells, K., & Day, A. (2002). Anger in prisoners: Women are different from men. <i>Personality and individual differences, 32</i>, 1087-1100.</p> <p>Wallbott, H. G. (1998). Bodily expression of emotion. <i>European journal of social psychology, 28</i>, 879-896.</p>																													

