

# Verbal aggressiveness and argumentativeness at the primary school: A gender-specific analysis

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## ABSTRACT

The study examined the effects of verbal aggressiveness and argumentativeness in relation to gender. Two experimental groups (44 children-18 boys and 26 girls-for the study of verbal aggressiveness and 61 children-29 boys and 32 girls-for the study of argumentativeness) and a control group (29 children-17 boys and 12 girls) in three primary schools in Magnesia participated. A questionnaire was used before and after an intervention. Results: Verbal aggression had a stronger influence on boys than argumentativeness on girls. Regarding the variable “badly threateningly,” the influence for boys was statistically significant in the control group after relaxation time, with more participation for the male physical education instructor. Regarding the variable “badly threateningly,” the influence for girls was statistically significant in argumentativeness before and after the speech, with more participation for the male physical education instructor after the speech. Concerning the variable “came back,” the influence for boys was statistically significant in verbal aggressiveness before and after the speech, with more participation for the female physical education instructor after the speech and for the control group for girls before relaxation time that came before the female and young physical education instructor. The variable of “how much aggressive” showed that the influence for boys was statistically significant in verbal aggressiveness before the speech with more participation in young physical education instructors. Two experimental groups may be more beneficial in the early and terminal stages of learning for these two dependent variables.

**Keywords:** *Argumentativeness, Control and experimental group, Gender, Physical education, Primary school, Verbal aggressiveness.*

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**Authors' Contributions:** Conceived and designed the analysis, collected the data, wrote the paper, D.B.; contributed data and analysis tool, performed the analysis, wrote part of the paper, M.L.; performed analysis and edited the paper, A.B. and N.H. All authors have read and agreed to the published version of the manuscript.

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### Highlights of this paper

- Argumentativeness intervention seems to affect girls more.
- The elderly seem to be affected by aggressiveness.
- The coach's behaviour (aggressive or argumentative) may affect the students.

## 1. INTRODUCTION

Verbal aggressiveness has long been studied in terms of the negative effects it induces in educational and sports contexts (Bekiari & Hasanagas, 2016; Litsa & Bekiari, 2022a; Myers, Brann, & Martin, 2013; Rocca, 2004) as well as in organization and work environments (Madlock & Kennedy-Lightsey, 2010). A positive climate between students and instructors where verbal aggressiveness is decreased has been proven to enhance students' performance and exercise execution in yoga classes (Deshpande, Nagendra, & Nagarathna, 2008). In a study by Bekiari and Sympas (2015), verbal aggressiveness use appeared to be increasing in the case of contact sports while decreasing in the case of non-contact sports, suggesting a relation between the nature of the sport and the intriguing nature of verbal aggressiveness. Other studies have examined the relationship between verbal aggressiveness and interpersonal attractiveness.

In Bekiari and Spyropoulou (2016) verbal aggressiveness does not favor social and task attractiveness in the university environment. Similar results have been suggested by Litsa and Bekiari (2022b) in a study of high school physical education social networks by Litsa and Bekiari (2022c) in a study concerning physical education university student networks, where it was indicated that social, and more importantly, task attractiveness protects from verbal aggressiveness targeting. Another study by Bekiari (2016) also showed the relation between verbal aggressiveness, autocratic leadership style, and Machiavellianism with negative effects on the motivation climate in classes. An additional issue examined was conversation sensitivity and the extent to which it can infer verbal aggressiveness during a discussion (Chesebro & Martin, 2003) showing no statistical relation between the two, whereas Hamilton and Hample (2011) indicated a positive relationship between arguing and waning of verbal aggressiveness in the educational contexts of colleges, and Bench-Capon (2003) suggested that argumentative skills can lead to persuasion. This is also supported by consecutive studies by Litsa and Bekiari (2022b); Litsa and Bekiari (2022c) and Litsa and Bekiari (2022d) that followed mixed methodology and indicated that persuasion is the most frequently occurring perception on of high school and university students regarding argumentativeness.

Furthermore, Cho and Jonassen (2002) found a positive relationship between argumentativeness, problem solving, and team-building spirit, while Jeong and Joung (2007) state that non-argumentative students are less tolerant of differences and exemplification in comparison to argumentative ones, which aligns with the results provided by Deliligka, Bekiari, and Sympas (2017) who have also supported that a lack of arguments may easily lead to verbal aggressiveness. Behaviours are developed and affected as a result of social learning and interaction, and examining the potential of shaping behaviours at school through targeted implementations is of paramount importance in an era where incidents of verbal abuse are more than often reported (Firdaus & Basuki, 2023). The purpose of the research was to examine the effects of verbal aggressiveness and argumentativeness in relation to gender.

The goal was to reveal if an intervention, i.e., a speech regarding the impacts of aggressive and argumentative behaviour, may influence boys and girls in primary education regarding verbal aggressive and argumentative behaviour and which stage of the intervention, before or after the stages of learning, seems to be more beneficial regarding boys and girls.

## 2. METHODOLOGY

### 2.1. Participants

One hundred thirty-four students (64 males and 70 females) aged 10-12 years old ( $M = 10.48$ ,  $SD = .52$ ) participated in this research from three primary schools. Students participated voluntarily in this study and were separated into three groups: A control group ( $n = 29$ ), a verbal aggressiveness group ( $n = 44$ -18 boys and 26 girls) and an argumentativeness group ( $n = 61$ -29 boys and 32 girls). The control group consisted of 29 children -17 boys and 12 girls from 2nd Artemidas-Kato Lehonion primary school, the verbal aggressiveness group consisted of 44 children from 1st primary school in Volos, and the argumentativeness group consisted of 61 children from 9th primary school in Volos.

### 2.2. Measures and Procedure

Special permission from the Institute of Educational Policy and the Ministry of Education was given in order to allow the conduct of research in primary schools. The control group took part in team sports such as football, basketball, and volleyball. Students answered questionnaires twice with regard to verbal aggressiveness and argumentativeness (Bekiari, Digelidis, & Sakelariou, 2006; Infante & Wigley, 1986). Analytically, participants in the control group completed one questionnaire after relaxing, and at the end, they completed the same questionnaire again with the same questions. Students in the verbal aggressiveness control group first completed this questionnaire, and after they were delivered a speech about verbal aggressiveness, they completed the same questionnaire. Students in the argumentativeness control group, first completed this questionnaire, and after they were delivered a speech about argumentativeness, including many sketches, they completed the same questionnaire. Children answered all questions on various scales (0-1, 0-2, 0-3, from 0-1 to 1, 0-4, 0-3 and 0-1). These questions were related to the subject of physical education and the physical education instructor who could supposedly ask them to do absurd things (e.g., students are not good if they are not inflicted). So, children answered questions related to these speeches, such as the educational level, the affinity to their instructor, aggressiveness, the length of their answer, asking for help from the headteacher or parents, the discussion with students, friends, the sex, the age, the educational level of their father or mother, their parents' jobs, the financial situation, journeys abroad the use of internet, the concern for lessons and professional aspirations, the kindness, the familiarity, the help they may get from classmates, and reference to a bad occasion they saw in school from the physical education instructor. Children were in schoolrooms, answering all questions twice, and were encouraged to respond honestly to this questionnaire.

## 3. RESULTS

### 3.1. Initial Measurements

In relation to the three groups (control, verbal aggressiveness, and argumentativeness), we observed that the participants in this study used sufficient phrases ( $M = .50$ ,  $SD = .50$ ,  $M = .50$ ,  $SD = .50$ ,  $M = .50$ ,  $SD = .50$ ,  $SD = .50$ , respectively), because these words seem to influence these individuals by the physical education teacher. words at large values ( $M = 2.24$ ,  $SD = .78$ ) that influenced students in this survey.

### 3.2. Gender-Based Performance

The variance analysis of repeated two-way measurements (3 groups x 4 dependent variables) is presented to show the differences regarding gender (boys, girls) between the two experimental groups (verbal aggressiveness and argumentativeness) and the control group based on the dependent variable *seriously offensive*; in addition, the children of the control group (Boys and girls questionnaire before and after the same questionnaire) did not present

statistically significant differences based on the variable *seriously offensive*. On the contrary, regarding the variable of *verbal aggressiveness*, we observed statistically significant results for boys before the talk on the particular topic by the experimenter in comparison to the variable *seriously offensive* in the Tests of Within Subjects Effects  $F(3, 51) = 7.31, p = .00, \eta^2 = .30$ , observed power = .98, in Pairwise Comparisons. With the Bonferroni process in the interaction of verbal aggressiveness and seriously offensive based on the dependent variable seriously offensive (male and advanced age,  $p = .00$ , young and advanced age,  $p = .00$ ) and in Multivariate Tests  $F(3, 15) = 6.36, p = .00, \eta^2 = .56$ , observed power = .91. We also observed statistically significant differences for boys after the experimenter's speech on the specific topic in the variable of *verbal aggressiveness*, while in the variable of *seriously offensive* in Tests of Within Subjects Effects  $F(3, 51) = 5.44, p = .00, \eta^2 = .24$ , we observed power = .92, in Pairwise Comparisons by the process Bonferroni as to the interaction of *verbal aggressiveness* and *seriously offensive* based on the dependent variable *seriously offensive* (man and woman,  $p = .04$ , man and advanced age,  $p = .01$ ) and in Multivariate Tests  $F(3, 15) = 4.97, p = .01, \eta^2 = .50$ , observed power = .82.

Also, we noticed statistically significant differences in the *argumentativeness* variable, for girls before the experimenter talked about this topic on the variable seriously offensive in Tests of Within Subjects Effects  $F(3, 93) = 7.90, p = .00, \eta^2 = .20$ , observed power = .99, in Pairwise Comparisons with Bonferroni for the interaction of argumentativeness and *seriously offensive* based on the dependent variable seriously offensive (man and woman,  $p = .00$ , man and young,  $p = .01$ , male and advanced age,  $p = .00$ ) and in multivariate tests  $F(3, 29) = 6.57, p = .00, \eta^2 = .40$ , observed power = .95.

We also observed statistically significant results in the variable of the argumentativeness for girls after the experimenter spoke about this topic about the variable *seriously offensive* in the Tests of Within Subjects Effects  $F(3, 90) = 9.53, p = .00, \eta^2 = .24$ , observed power = 1.00, in Pairwise Comparisons with the Bonferroni process of argumentativeness interaction and *seriously offensive*. Cohen's  $d$  examined the magnitude of the effect between these three groups, where the results are shown in detail in [Table 1](#) as well as the Averages and Standard Deviations. In addition, for the variable *seriously offensive*, we noticed that in the control group for boys, it precedes after the rest in relation to prior to the rest for the man, woman, young, and advanced age.

For the variable *seriously offensive*, we noticed that in the control group for girls, it precedes after rest over the one before rest for the male and for those of advanced age, in contrast to the women and the young men who precede before rest in relation to after rest. In addition, for the variable *seriously offensive*, we noticed that in verbal aggressiveness for boys, it precedes the speech over the pre-speech for the man, young and advanced age, as opposed to the woman, who was equivalent. For the variable seriously offensive, we noticed that in verbal aggression for girls, it precedes after the speech in relation to the before the speech about the man, woman, young and advanced age.

In addition, for the variable seriously offensively, we noticed that in the argumentation for boys, it precedes before the speech in relation to the post-speech for the man, woman, young and advanced age. For the variable seriously offensive we noticed that in the argumentation for girls it precedes after the speech over the pre-speech for the young man, as opposed to the man and the advanced age who precedes before the speech in relation to the after-speech, while for the woman they were equivalent. These results are shown in [Figures 1 and 2](#).

Table 1. Performances scores in variable “disparaging” of experimental and control groups.

Groups	Disparaging (Boys)	Disparaging (Girls)	d	Disparaging (Younger)	d	Disparaging (Older)	D
	M±SD	M±SD		M±SD		M±SD	
Control before boys	1.18±0.53	0.82±.88	-0.68	1.12±.78	-0.11	0.88±0.86	-0.57
Control after boys	1.37±0.81	1.00±.082	-0.46	1.25±0.77	-0.15	1.06±0.85	-0.38
Control before girls	1.25±0.62	1.50±0.67	0.40	1.33±0.65	0.13	0.75±0.87	-0.81
Control after girls	1.38±0.77	1.46±0.66	0.10	1.00±0.58	-0.49	0.85±0.99	-0.69
Experimental 1 (Verbal aggressiveness) before boys	1.50±0.51	1.17±0.71	-0.65	1.33±0.69	-0.33	0.61±0.78	-1.74
Experimental 1 (Verbal aggressiveness) after boys	1.61±0.50	1.17±0.71	-0.88	1.39±0.61	-0.44	1.00±0.84	-1.22
Experimental 1 (Verbal aggressiveness) before girls	1.35±0.69	1.23±0.71	-0.17	1.08±0.69	-0.39	1.08±0.74	-0.39
Experimental 1 (Verbal aggressiveness) after girls	1.50±0.65	1.42±0.64	-0.12	1.58±0.58	0.12	1.27±0.78	-0.35
Experimental 2 (Argumentativeness) before boys	1.34±0.72	1.07±0.75	-0.37	1.10±0.77	-0.33	1.03±0.50	-0.43
Experimental 2 (Argumentativeness) after boys	1.07±0.83	1.03±0.81	-0.05	0.97±0.85	-0.12	1.00±0.83	-0.08
Experimental 2 (Argumentativeness) before girls	1.56±0.50	0.97±0.78	-1.18	1.09±0.69	-0.94	0.87±0.83	-1.38
Experimental 2 (Argumentativeness) after girls	1.39±0.67	0.97±0.79	-0.63	1.26±0.73	-0.19	0.64±0.80	-1.12

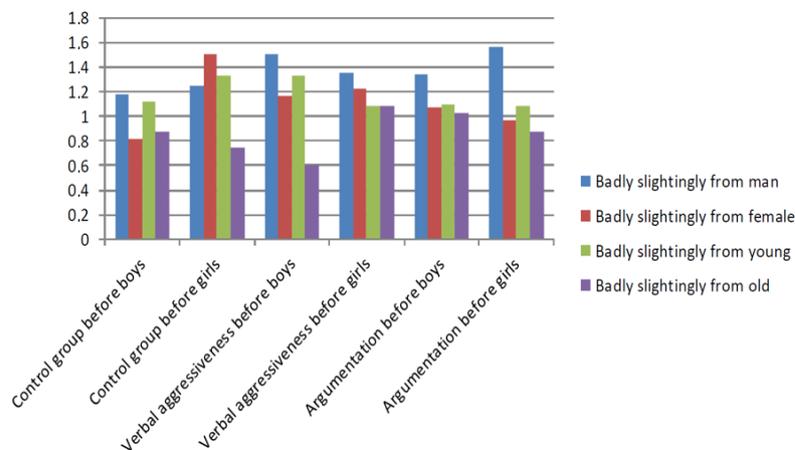


Figure 1. Performances scores of badly slighting for two experimental and control groups.

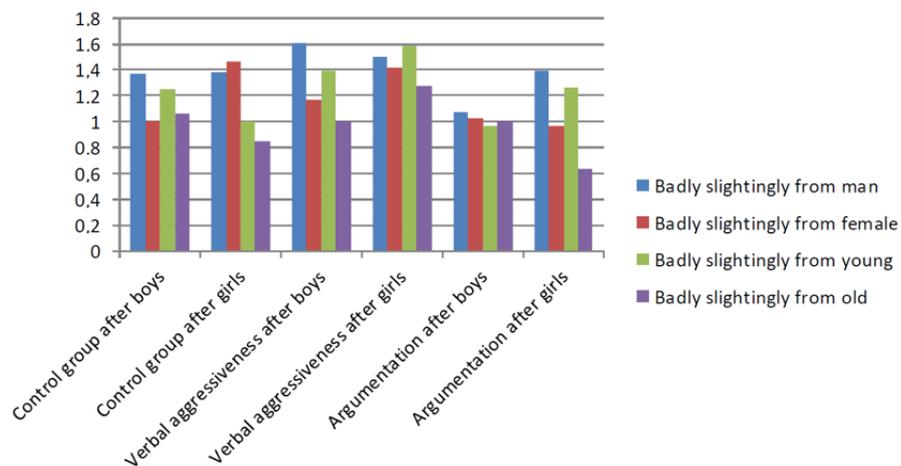


Figure 2. Performances scores of disparaging for two experimental and control groups.

Variation analysis of repeated two-way measurements (3 groups x 4 dependent variables) indicated differences in gender (boys, girls) between the two experimental groups (verbal aggressiveness and argumentativeness), and the control group based on the dependent variable *seriously threatening*. In addition, we observed statistically significant differences in the control group for boys after rest with the same questionnaire regarding the variable *severely threatening* in Tests of Within Subjects Effects  $F(3, 45) = 3.24, p = .03, \eta^2 = .18$ , observed power = .71, in Pairwise Comparisons with the Bonferroni procedure for the interaction of the control group and the *seriously threatening* based on the dependent variable *seriously threatening* (man and woman,  $p = .02$ ) and in the Multivariate Tests  $F(3, 13) = 3.95, p = .03, \eta^2 = .48$ , observed power = .70. Also, we saw statistically significant results for boys before the conversation on a specific topic by the experimenter in the variable of verbal aggression in terms of the variable *seriously threatening* in the Tests of Within Subjects Effects  $F(3, 51) = 6.54, p = .00, \eta^2 = .28$ , observed power = .96, in Pairwise Comparisons with the Bonferroni procedure in the interaction of verbal aggressiveness and the *seriously threatening* based on the dependent variable *seriously threatening* (male and young,  $p = .01$ , male and advanced age,  $p = .02$ ) and in the Multivariate Tests  $F(3, 15) = 5.10, p = .01, \eta^2 = .50$ , observed power = .83.

We also observed statistically significant differences for boys after the experimenter spoke on a specific topic observed in the variable of verbal aggression in the variable of *seriously threatening* in Tests of Within Subjects Effects  $F(3, 51) = 3.27, p = .03, \eta^2 = .16$ , observed power = .72, in Pairwise Comparisons by the process Bonferroni as to the interaction of verbal aggression and the *seriously threatening* based on the dependent variable *seriously threatening* (male and young,  $p = .00$ ) and in multivariate tests  $F(3, 15) = 5.21, p = .01, \eta^2 = .51$ , observed power = .84. In addition, we observed statistically significant differences for boys before the discussion on this topic by the experimenter about the variable *seriously threatening* in the Tests of Within Subjects Effects  $F(3, 84) = 6.02, p = .00, \eta^2 = .18$ , observed power = .95, at Pairwise Comparisons with the Bonferroni procedure for the interaction of argumentation and *seriously threatening* based on the dependent variable *seriously threatening* (man and woman,  $p = .00$ , male and young,  $p = .01$ , male and advanced age,  $p = .01$ ) and in Multivariate Tests  $F(3, 26) = 8.69, p = .00, \eta^2 = .50$ , observed power = .99. Also, we saw statistically significant results in the variable of argumentation for girls before the experimenter talked about this topic on the variable *seriously threatening* in Tests of Within Subjects Effects  $F(3, 93) = 5.99, p = .00, \eta^2 = .16$ , observed power = .95, in Pairwise Comparisons with the procedure Bonferroni of the argumentation interaction and *seriously threatening* based on the dependent variable *seriously threatening* (man and woman,  $p = .02$ , man and advanced age,  $p = .01$ ) and in the Multivariate Tests  $F(3, 29) = 5.07, p = .01, \eta^2 = .34$ , observed power = .88. Also, we saw statistically significant results in the variable of argumentation for girls after speaking on this topic by the experimenter for the variable *seriously threatening* in Tests of Within Subjects Effects  $F(3, 90) = 6.31, p = .00, \eta^2 = .17$ , observed power = .96, in Pairwise Comparisons with the Bonferroni process of the argumentational interaction and *seriously threatening* based on the dependent variable *seriously threatening* (male and advanced age,  $p = .01$ ) and in Multivariate Tests  $F(3, 28) = 4.22, p = .01, \eta^2 = .31$ , observed power = .80. Based on the above results, we observed that boys had better pre-speech results in the variable serious threat of verbal aggression than boys after speaking in the variable seriously threatening of verbal aggression in Tests of Within Subjects Effects.

On the contrary, we observed that girls had better results after speaking than girls before speaking in the variable seriously threatening argumentation in Tests of Within Subjects Effects. Cohen's  $d$  examined the magnitude of the effect between these three groups, where the results are shown in detail in [Table 2](#) as well as the Averages and Standard Deviations. In addition, for the variable seriously threatening, we observed that in the control group for boys, it precedes after rest over the before rest for the young man, in contrast to the men, woman, and people of advanced age who precede before rest in a relation after test. For the variable seriously threatening, we

noticed that the control group for girls precedes before resting in relation to the post-rest for the men, woman, and young, and those of advanced age. In addition, for the variable *seriously threatening*, we observed that verbal aggressiveness for boys precedes the speech in relation to the pre-speech for the advanced age, in contrast to the man and woman who precede the speech in relation to the after-speech, while for the young man they were equivalent. For the variable *seriously threatening*, we noticed that verbal aggressiveness for girls precedes after the speech in relation to the pre-speech for the young man, in contrast to the man and those of advanced age who precede before the speech in relation to the after the speech, while for the woman they were equivalent. In addition, for the variable *seriously threatening*, we observed that argumentativeness for boys precedes after the speech in relation to the pre-speech for the woman, of advanced age, in contrast to the man and the young man who precede before the speech in relation to the after-speech. For the variable *seriously threateningly*, we noticed that in the argumentation for girls, it precedes after the speech in relation to the before the speech about the man, woman, young, as opposed to those of advanced age, which were equivalent. These results are shown in [Figures 3 and 4](#).

Table 2. Performances scores for variable badly threateningly of experimental and control groups.

Groups	Badly threateningly by man	Badly threateningly by female	d	Badly threateningly by young	d	Badly threateningly by old	d
	<i>M±SD</i>	<i>M±SD</i>		<i>M±SD</i>		<i>M±SD</i>	
Control before boys	1.53±0.62	0.94±0.83	-0.95	1.00±0.71	-0.85	1.23±0.90	-0.48
Control after boys	1.50±0.82	0.87±0.81	-0.77	1.31±0.79	-0.23	1.12±0.88	-0.46
Control before girls	1.50±0.67	1.42±0.67	-0.12	1.17±0.58	-0.49	1.08±0.79	-0.63
Control after girls	1.46±0.66	1.31±0.75	-0.23	1.08±0.49	-0.57	0.92±0.86	-0.82
Experimental 1 (Verbal aggressiveness) before boys	1.67±0.68	1.39±0.78	-0.41	1.11±0.76	-0.82	1.11±0.83	-0.82
Experimental 1 (Verbal aggressiveness) after boys	1.61±0.61	1.22±0.81	-0.64	1.11±0.76	-0.82	1.28±0.83	-0.54
Experimental 1 (Verbal aggressiveness) before girls	1.65±0.63	1.46±0.76	-0.30	1.54±0.71	-0.17	1.31±0.88	-0.54
Experimental 1 (Verbal aggressiveness) after girls	1.50±0.71	1.46±0.71	-0.06	1.58±0.64	0.11	1.27±0.83	-0.32
Experimental 2 (Argumentativeness) before boys	1.55±0.74	1.00±0.84	-0.74	1.14±0.79	-0.55	1.00±0.84	-0.74
Experimental 2 (Argumentativeness) after boys	1.27±0.74	1.20±0.76	-0.09	1.00±0.87	-0.36	1.13±0.82	-0.19
Experimental 2 (Argumentativeness) before girls	1.44±0.71	1.00±0.80	-0.62	1.19±0.78	-0.35	0.84±0.72	-0.84
Experimental 2 (Argumentativeness) after girls	1.45±0.67	1.29±0.78	-0.24	1.29±0.78	-0.24	0.84±0.86	-0.91

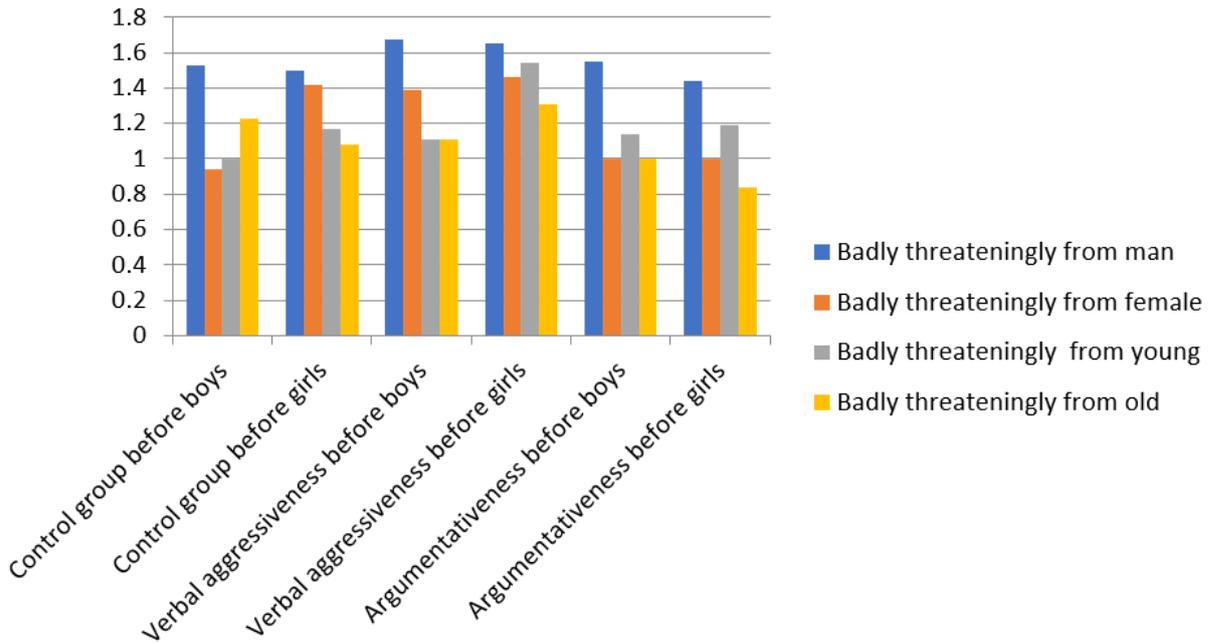


Figure 3. Performances scores of badly threateningly for two experimental and control groups.

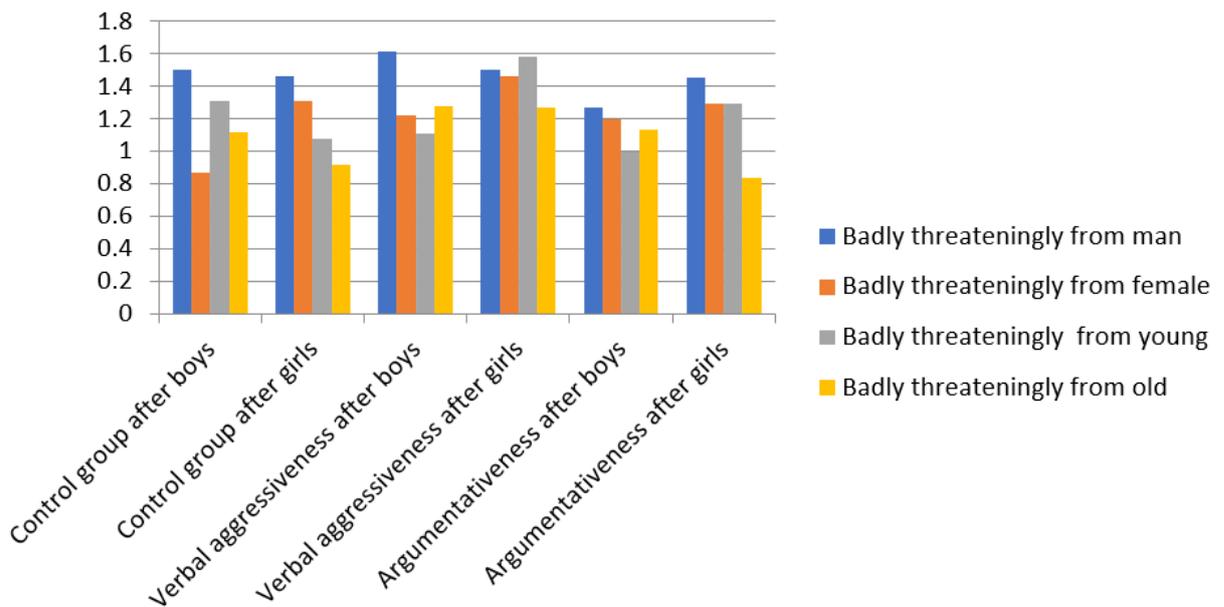


Figure 4. Performances scores of badly threateningly for two experimental and control groups.

#### 4. DISCUSSION

This study dealt with the subjects of verbal aggressiveness and argumentativeness regarding sex in three groups. These groups were the control group and two experimental groups: one experimental group of verbal aggressiveness and one experimental group of argumentativeness. All groups answered the same questionnaire twice: the control group at the beginning and after relaxation, and two experimental groups before and after the speech delivered about verbal aggressiveness and argumentativeness, respectively. The results showed that the dependent variable *disparaging* that appears statistically significant in primary measurements for boys at verbal aggressiveness concerns male, young, and female. The same variable in the final measurements about boys of verbal aggressiveness concerns the male, young, female, and older. The variable of argumentativeness in primary measurements about girls concerns male, young, female, and old. The same variable of final measurements about

girls regarding argumentativeness concerns male, young, female, old. The results showed that the dependent variable *badly threatening*, which is statistically significant in primary measurements for boys' verbal aggressiveness, remains in same position, and argumentativeness remains the same for boys, girls, and the older students. The same variable of final measurements about boys in the control group remains the same for male, young, old, female and for verbal aggressiveness it concerns male, older, female, and young. In the primary measurements of the variable argumentativeness there seems to be no difference for male, young, female, and old. There are no differences in the variable of argumentativeness in the final measurements regarding male, female, and younger students. The results showed that the dependent variable that is statistically significant in primary measurements remains statistically significant as a variable in final measurements about boys in the control group, the female, old, and verbal aggressiveness. In the same variable of primary measurements about girls at control group the female and young are in the same position as the older students at argumentativeness, where the place is for female, young, and older. The same variable in the final measurements of argumentativeness showed precedence of female, young, male, and older. The results showed that the dependent variable of *how much aggressiveness* is statistically significant in primary measurements for boys for verbal aggressiveness about young, man, female, and old.

In this study, we observed that the dependent variable *disparaging* for boys preceded after the speech in relation to the results before speech for boys, younger and older, while for females, after speech and before speech, the results were equivalent for verbal aggressiveness. This may have happened because the verbal aggressiveness of coaches can have a positive relationship with anxiety, an autocratic style, and a negative relationship with pleasure, efficiency, attempt, and democratic style (Bekiari, 2014). This study showed that the dependent variable *badly threatening* for boys preceded after speech in relation to the results before speech for the elderly, while before speech preceded in relation to after speech for men, females, and young people. After speech and before speech were equivalent for verbal aggressiveness. Similar results were found for the subject of verbal aggressiveness because casual behavior was affected by verbal aggressiveness, and those individuals seemed to be sensitive to such things (Bekiari & Hasanagas, 2016) while the verbal aggressiveness of teachers didn't affect a large number of class (Snyder, Forbus, & Cistulli, 2012). This study showed that the dependent variable of aggressiveness for boys before speech showed similar results for young, boys, females, and older people for verbal aggressiveness. This coincides with the results observed for the subject of verbal aggressiveness found in Theocharis, Bekiari, and Koustelios (2017).

## 5. CONCLUSION

This research discovered that the dependent variable *disparaging* of girls preceded after speech in relation to before speech for young were equivalent for argumentativeness. Different results were observed for argumentativeness, because this variable in this paper demonstrated importance in rules with rigidity in subjects' in connection with literature (Caminada & Amgoud, 2007). In this study, it was indicated that argumentativeness would provide more accurate results because this variable had better results than students that belonged to the control group for significant subjects of learning in variable situations (Asterhan & Schwarz, 2007). In this research, it was observed that for dependent variable *badly threatening* of girls preceding the speech in relation to after the speech for men, women, young, and old, after speech and before speech were equivalent for argumentativeness. Same results for argumentativeness were shown to help at individual level (Asterhan & Schwarz, 2009). In this article, we examined three new suggestions reported in theoretical relation to argumentativeness: the support as conclusion, the necessary support, and the support based on circumstantial evidence. These propositions had evolved independently across different black borders. They restated these instances in a competent environment

that became capable of assuming one comparative study made up of three acquired variants of support (Cayrol & Lagasquie-Schiex, 2013). In this study, it was observed for the dependent variable, came back after speech in relation to before speech for men, women, young people, and old people for argumentativeness. Perhaps the similar results showed argumentativeness, because they particularly examined three snippets from a sixth-grade class with respect to how students and teachers perceived what happened. The argumentativeness showed vitality when framed for the individuals and the class overall that affect and are affected by students engaged in argumentativeness (Berland & Hammer, 2012).

## 6. IMPLICATIONS AND SUGGESTIONS

Our research showed that these four dependent variables, specifically *disparaging* and *badly threatening*, influenced students in three groups: control group, verbal aggressiveness, and argumentativeness. The future research could make use of a larger sample, including more schools, children, and extend the duration of lecture in an effort to validate the relationship between the variables and the groups.

## REFERENCES

- Asterhan, C. S., & Schwarz, B. B. (2007). The effects of monological and dialogical argumentation on concept learning in evolutionary theory. *Journal of Educational Psychology, 99*(3), 626-639. <https://doi.org/10.1037/0022-0663.99.3.626>
- Asterhan, C. S., & Schwarz, B. B. (2009). Argumentation and explanation in conceptual change: Indications from protocol analyses of peer-to-peer dialog. *Cognitive Science, 33*(3), 374-400. <https://doi.org/10.1111/j.1551-6709.2009.01017.x>
- Bekiari, A. (2014). Verbal aggressiveness and leadership style of sports instructors and their relationship with athletes' intrinsic motivation. *Creative Education, 5*(2), 114-121. <https://doi.org/10.4236/ce.2014.52018>
- Bekiari, A. (2016). Insights into instructors' verbal aggressiveness and students' machiavellianism through leadership style and motivational climate. *European Scientific Journal, 12*(25), 90-110. <https://doi.org/10.19044/esj.2016.v12n25p90>
- Bekiari, A., Digelidis, N., & Sakelariou, K. (2006). Perceived verbal aggressiveness of coaches in volleyball and basketball: A preliminary study. *Perceptual and Motor Skills, 103*(2), 526-530.
- Bekiari, A., & Hasanagas, N. (2016). Suggesting indicators of superficiality and purity in verbal aggressiveness: An application in adult education class networks of prison inmates. *Open Journal of Social Sciences, 4*(03), 279-292. <https://doi.org/10.4236/jss.2016.43035>
- Bekiari, A., & Spyropoulou, S. (2016). Exploration of verbal aggressiveness and interpersonal attraction through social network analysis: Using university physical education class as an illustration. *Open Journal of Social Sciences, 4*(06), 145-155. <https://doi.org/10.4236/jss.2016.46016>
- Bekiari, A., & Sympas, I. (2015). Coaches' verbal aggressiveness and motivational climate as predictors of athletes' satisfaction. *British Journal of Education, Society & Behavioural Science, 9*(4), 318-329. <https://doi.org/10.9734/bjesbs/2015/17757>
- Bench-Capon, T. J. (2003). Persuasion in practical argument using value-based argumentation frameworks. *Journal of Logic and Computation, 13*(3), 429-448. <https://doi.org/10.1093/logcom/13.3.429>
- Berland, L. K., & Hammer, D. (2012). Framing for scientific argumentation. *Journal of Research in Science Teaching, 49*(1), 68-94. <https://doi.org/10.1002/tea.20446>
- Caminada, M., & Amgoud, L. (2007). On the evaluation of argumentation formalisms. *Artificial Intelligence, 171*(5-6), 286-310. <https://doi.org/10.1016/j.artint.2007.02.003>
- Cayrol, C., & Lagasquie-Schiex, M.-C. (2013). Bipolarity in argumentation graphs: Towards a better understanding. *International Journal of Approximate Reasoning, 54*(7), 876-899. <https://doi.org/10.1016/j.ijar.2013.03.001>

- Chesebro, J. L., & Martin, M. M. (2003). The relationship between conversational sensitivity, cognitive flexibility, verbal aggressiveness and indirect interpersonal aggressiveness. *Communication Research Reports*, 20(2), 143-150. <https://doi.org/10.1080/08824090309388810>
- Cho, K.-L., & Jonassen, D. H. (2002). The effects of argumentation scaffolds on argumentation and problem solving. *Educational Technology Research and Development*, 50(3), 5-22. <https://doi.org/10.1007/bf02505022>
- Deliligka, S., Bekiari, A., & Syrmpas, I. (2017). Verbal aggressiveness and argumentativeness in physical education: Perceptions of teachers and students in qualitative and quantitative exploration. *Psychology*, 8(11), 1693-1717. <https://doi.org/10.4236/psych.2017.811112>
- Deshpande, S., Nagendra, H., & Nagarathna, R. (2008). A randomized control trial of the effect of yoga on verbal aggressiveness in normal healthy volunteers. *International Journal of Yoga*, 1(2), 76-82. <https://doi.org/10.4103/0973-6131.41034>
- Firdaus, M., & Basuki, A. (2023). *The effectiveness of behavior contract technique group counseling services to reduce aggressive behavior of high school students*. Paper presented at the In the International Seminar on Delivering Transpersonal Guidance and Counselling Services in School (ISDTGCSS 2022) Atlantis Press.
- Hamilton, M., & Hample, D. (2011). Testing hierarchical models of argumentativeness and verbal aggressiveness. *Communication Methods and Measures*, 5(3), 250-273. <https://doi.org/10.1080/19312458.2011.596991>
- Infante, D. A., & Wigley, I. C. J. (1986). Verbal aggressiveness: An interpersonal model and measure. *Communications Monographs*, 53(1), 61-69. <https://doi.org/10.1080/03637758609376126>
- Jeong, A., & Joung, S. (2007). Scaffolding collaborative argumentation in asynchronous discussions with message constraints and message labels. *Computers & Education*, 48(3), 427-445. <https://doi.org/10.1016/j.compedu.2005.02.002>
- Litsa, M., & Bekiari, A. (2022a). Attractiveness and aggressiveness: Implementing social network analysis in physical education classes. *Journal of Physical Education and Sport*, 22(4), 988-1001. <https://doi.org/10.7752/jpes.2022.04126>
- Litsa, M., & Bekiari, A. (2022b). Mixed methods in analysis of aggressiveness and attractiveness: Understanding PE class social networks with content analysis. *Education Sciences*, 12, 348-370. <https://doi.org/10.3390/educsci12050348>
- Litsa, M., & Bekiari, A. (2022c). The attractive, the aggressive and the withdrawn student in the university: Social network and content analysis. *International Journal of Sociology of Education*, 11(2), 151-184. <http://dx.doi.org/10.17583/riase.9110>
- Litsa, M., & Bekiari, A. (2022d). The powerful, the powerless, and the empowered: Visualizations of power in high school and university through social network analysis. *Power and Education*, 14(3), 262-281. <https://doi.org/10.1177/17577438221114431>
- Madlock, P. E., & Kennedy-Lightsey, C. (2010). The effects of supervisors' verbal aggressiveness and mentoring on their subordinates. *The Journal of Business Communication*, 47(1), 42-62. <https://doi.org/10.1177/0021943609353511>
- Myers, S. A., Brann, M., & Martin, M. M. (2013). Identifying the content and topics of instructor use of verbally aggressive messages. *Communication Research Reports*, 30(3), 252-258. <https://doi.org/10.1080/08824096.2013.806260>
- Rocca, K. A. (2004). College student attendance: Impact of instructor immediacy and verbal aggression. *Communication Education*, 53, 185-195. <https://doi.org/10.1080/03634520410001682447>
- Snyder, J., Forbus, R., & Cistulli, M. (2012). Attendance policies, student attendance, and instructor verbal aggressiveness. *Journal of Education for Business*, 87(3), 145-151. <https://doi.org/10.1080/08832323.2011.582192>
- Theocharis, D., Bekiari, A., & Koustelios, A. (2017). Exploration of determinants of verbal aggressiveness and leadership through network analysis and conventional statistics: Using school class as an illustration. *Sociology Mind*, 7(2), 27-43. <https://doi.org/10.4236/sm.2017.72003>

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