

# Analyzing Networks of Verbal Aggressiveness and Motivation

Alexandra Bekiari, Stergiani Deliligka, Nikolaos Hasanagas

Faculty of Physical Education and Sports Sciences, University of Thessaly, Trikala, Greece  
Email: sandrab@pe.uth.gr

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## Abstract

Aim of this research is to analyze motivation and verbal aggressiveness as structure of relations and to detect their determinants. A university class of 62 students and 4 instructors has been analyzed as a network. In- and out-degree, degree, pagerank, katz and authority have been calculated. They were correlated (Spearman test) with several non-network variables such as economic status, age, gender, etc. Visone and SPSS have been used. Main results are the following: Mastery influence is a more common situation than influence aiming at performance and verbal aggressiveness which necessitate fanaticism or familiarity. Students with high grade are quite central in influencing and being influenced for learning pedagogic-psychological issues. In the case of learning biology (mastery), the teaching staff is the main stimulator in contrast to case of pedagogic-psychological field. The age and the experience of travelling abroad are also conducive to learning biology. Male students seem to be more influential than the female ones, as the sport is still perceived as a male-dominated field. Students interested in medicinal subjects are rather unable to stimulate others in sport issues, as there is a contextual deficit between medicinal and sport subjects. Female students seem to stimulate for improvement. Students interested in the medicinal subjects tend to be stimulated and to stimulate others to surpass performance limits. The desire for professional eminence also seems to discourage offenders indicating the existence of organization culture at the department. Travelling abroad for sport reasons increases offensiveness. Students originating from rural areas tend more to become target of offenses, indicating thus spatial-regional discrimination. Students of higher economic state are more deriding. The proposed typologies of motivation influence and verbal aggressiveness include the “invulnerable motivator” and the “vulnerable motivator” as well as the “strong motivator” and the “brawler” type.

## Keywords

Verbal Aggressiveness, Motivation, Network Analysis

## 1. Introduction

### 1.1. Verbal Aggressiveness

Verbal aggressiveness is the usage of hurtful words and insults, aiming at deconstructing the other person's dignity and self-image (Infante & Wigley, 1986; Infante & Rancer, 1996). The consequence is to create negative emotions such as shame, humiliation, despair, depression, and further negative feelings about themselves (Infante, 1987; Infante & Rancer, 1982; Infante & Wigley, 1986; Infante, Riddle, Horvath, & Tumlin, 1992; Infante & Rancer, 1993; Rancer & Avtgis, 2006; Piko & Keresztes, 2006). Verbal aggressiveness is detrimental to society, both for every individual and as an overall (Hamilton, 2012). In addition, it is one of the most severe causes of physical aggressiveness (Hamilton, Buck, Chory, Beatty, & Patrylak, 2008). Communication among instructors and students affects substantially the learning process, behavior, thinking and motivation (Bekiari, 2014; Richmond, McCroskey, Kearney, & Plax 1987). However, verbal aggressiveness is widespread significantly in educational environment (Bekiari, Koustelios, & Sakellariou, 2000; Yaratana & Uludag, 2012; Kikas, Peets, Tropp, & Hinn, 2009) and comprises a feature of destructive communication that erodes human relations (Infante & Rancer, 1996; Infante & Wigley, 1986; Bekiari, Kokaridas, & Sakellariou, 2005; 2006; Bekiari, Digelidis, & Sakellariou, 2006; Bekiari, Patsiaouras, Kokaridas, & Sakellariou, 2006; Johnson, Becker, Wigley, Haigh, & Craig, 2007; Myers, Edwards, Wahl, & Martin, 2007; Bekiari, 2012; 2016; Rancer & Avtgis, 2014; Bekiari, Perkos, & Gerodimos, 2015; Bekiari & Syrmipas, 2015; Bekiari & Manoli, 2016; Bekiari & Pylarinou, 2017; Manoli & Bekiari, 2015), while a collaborative form of communication which promotes amity, is reduced (Hamilton & Hample, 2011). Communication form adopted by instructors may lead to students' anti-social behaviors (Claus, Booth-Butterfield, & Chory, 2012; Hassandra, Bekiari, & Sakellariou, 2007). Instructors' verbal aggressiveness seems to negatively affect the rise of a positive interaction with students (Martin & Myers, 2006). Verbally aggressive instructors may create more harsh conditions in their class, leading to less appealing and intimate communication relationships both with students and colleagues (Avtgis & Rancer, 2008; Rancer & Avtgis, 2006). A defensive climate is developed in the classroom, where the exchange of ideas and opinions is discouraged (Myers & Rocca, 2001). As a result, students' desire to interact (Schrodt, 2003; Edwards & Myers, 2007) and their perceptions about the instructors (Myers et al., 2007; Schrodt, 2003; Syrmipas & Bekiari, 2015; Wrench & Punyanunt-Carter, 2005; Bekiari & Tsiana, 2016; Bekiari & Tsaggopoulou, 2016; Bekiari & Petanidis, 2016) are negatively affected, considering them to be less reliable (Mazer & Stowe, 2016; Myers, 2001; Edwards & Myers, 2007; Schrodt, 2003). These findings indicate that every time instructors renege on students' aspirations by applying destructive forms of communication, students perceive that as a detachment and relational transgression (Vallade & Myers, 2014). Studying verbal aggressiveness is considered of utmost importance, since its consequences are harmful for the receivers (Aloia &

Solomon, 2016), especially among children and young people (Donovan & Brassard, 2011). Consequently, verbal aggressiveness seems not to be conducive to learning and personal progress (Bekiari, 2012; Bekiari & Hasanagas, 2016a, 2016b; Bekiari & Sakellariou, 2003). Although the use of verbal aggression is considered to lead to negative results in many settings, to certain extent, it is acceptable in sports. Namely, it is likely that a verbally aggressive coach should lead their athletes to be motivated in order to achieve higher performance (e.g. a champion's level of competition); however, it should also be noticed that verbal aggressiveness make athletes less willing to contact with their coach. Verbal aggressiveness has also been extensively examined with network analysis (Bekiari, Deliligka, & Koustelios, 2017; Bekiari & Hasanagas, 2015, 2016c; Bekiari & Spuropoulou, 2016; Hasanagas & Bekiari, 2015, 2017; Theoharis, Bekiari, & Koustelios, 2017). These analyses have revealed deep-rooted structures of aggressiveness behaviour.

## 1.2. Motivational Climate

The motivational climate can be defined as an environment of social settings (terms and actions of reward or penalties formally or informally) which orient trainees either to learn or performance goals. Motivational climate refers to a goal-oriented psychological environment in achievement settings, which is determined by situational factors (such as instructors) (Ames, 1992). Instructors' effect is of crucial importance and multifaceted as they can urge and encourage the students' active participation both during the educational process as well as after this (Granero-Gallegos, Baena-Extremera, Gómez-López, & Abrales, 2014). There have been stated two types of motivational climate, mastery or task-involving climate and performance or ego-involving climate, which derive from Achievement Goal Theory (AGT; Maehr & Nicholls, 1980, Nicholls, 1984; 1989). Instructors may promote either of the two major motivational climates (Bortoli, Bertollo, Vitali, Filho, & Robazza, 2015). Mastery climate is encouraged by instructor's focus on cognitive ability, effort and self-improvement (Ames, 1992; Roberts, Treasure, & Conroy, 2007). Extensive research has shown the attachment with prosperity, joy, task insistency, adaptability (Ntoumanis & Biddle, 1999; Roberts, 2012; Van De Pol, Kavussanu, & Ring, 2012), greater efforts, pleasure, decreased anxiety (Cunningham & Xiang, 2008; Kavussanu & Roberts, 2001; Atkins, Johnson, Force, & Petrie, 2015; Smith, Smoll, & Cumming, 2007), self-evaluation and general satisfaction (Kavussanu & Harnisch, 2000; Le Bars, Gernigon, & Ninot, 2009; Atkins et al., 2015). In a performance motivational climate instructors encourage social comparison, superficially stimulate students during learning process using on regulative evaluation and recompensing performance results (Ames, 1992; Ames & Archer, 1988; Murcia, Camacho, & Rodríguez, 2008; Keegan, Spray, Harwood, & Lavallee, 2010), and enhance thereby the competition among students complimenting the most talented students (Cervelló & Santos-Rosa, 2001; Nicholls, 1989; Roberts, 2001). Performance-related motivational climate induces feelings of anxiety, stress, confusion, boredom and withdrawal, as it prevails lack of motivation (Liukkonen, Barkoukis,

Watt, & Jaakkola, 2010; Braithwaite, Spray, & Warburton, 2011; Cumming, Smoll, Smith, & Grossbard, 2007; Nerstad, Roberts, & Richardsen, 2013; Van De Pol et al., 2012; Granero-Gallegos et al., 2014; Ommundsen & KvalØ, 2007). Research has identified further behaviors and interactions that contribute to motivational climate, such as the influence between peers, based on promoting cooperation, support, affection, competition, disagreement and friendships (Vazou, Ntoumanis, & Duda, 2005; Keegan, Spray, Harwood, & Lavallee, 2009; Keegan, Spray, Harwood, & Lavallee, 2010; Beltman & Volet, 2007; Bengoechea & Streat, 2007; Weiss, Amorose, & Wilko, 2009).

### 1.3. Aim and Innovation

Aim of the present study is to detect and depict verbal aggressiveness and motivation as relations and, thereby, as structures within a group of students (incl. also instructors) as well as their determinants. All previous analyses have suggested approaches to the effects or determinants, but they have not examined the verbal aggressiveness and the motivation as relations among students or among students and instructors (there are only a few studies on verbal aggressiveness applying network analysis which has been mentioned above). This study tries to reveal deep-rooted structures of verbal aggressiveness and motivation and their determinants. Additionally to the analysis of the structures and their determinants, a typology depicting the combination among these structures is proposed.

In more details, verbal aggressiveness and motivational climate have been operationalized as structures and not only as ego-centric individual perceptions. Furthermore, an inevitable combination of network analysis and conventional statistics is presented. Thus, the innovation is not only theoretical but also methodological.

## 2. Method

A university class has been collected as a network sample at the physical education and sport sciences department of the University of Thessaly, Central Greece, in 2016, 3<sup>rd</sup> semester. It consisted of a class at the 4<sup>th</sup> semester. The students were 62 (male = 32, female = 30) and 4 instructors (male = 2, female = 2). It was not a random but a judgment sample, aiming at analytic and not at descriptive statistical results. Discretion and strict observing of research ethics was guaranteed to the participants so that they give sincere answers.

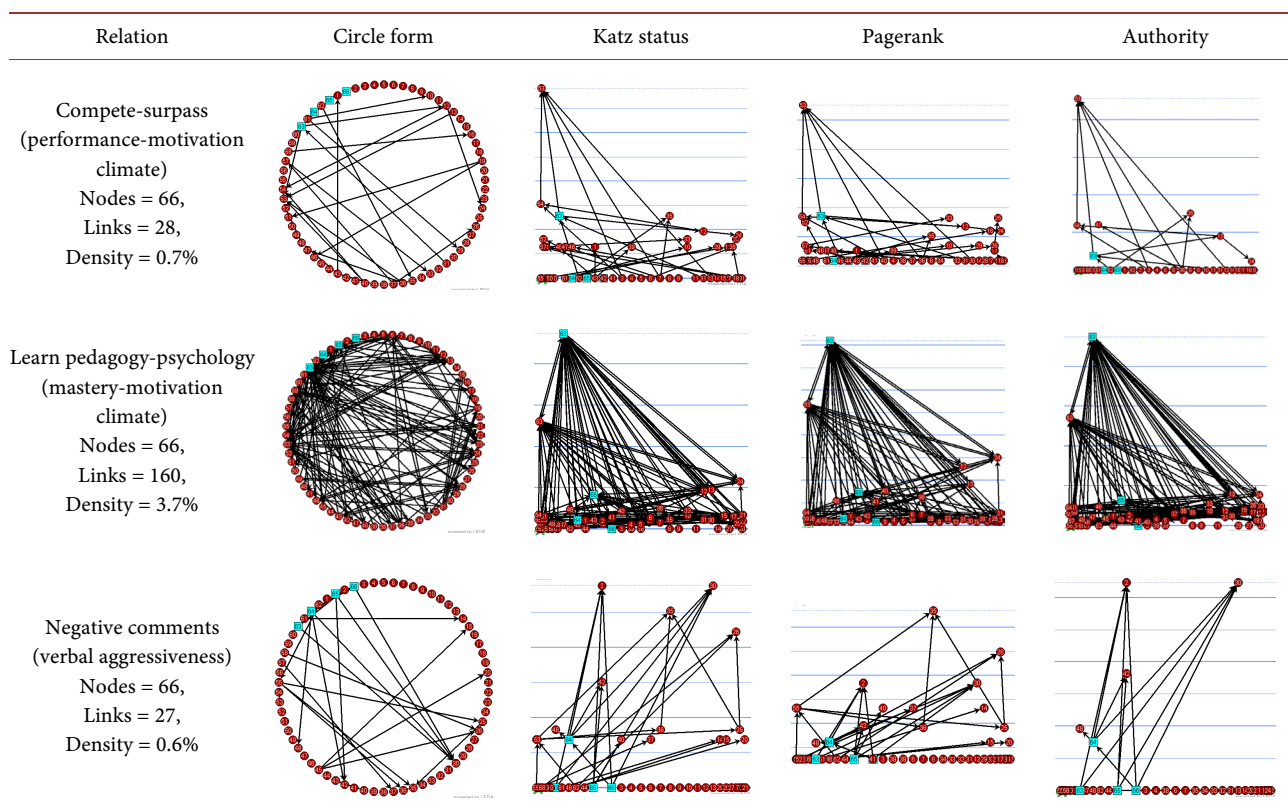
In total, 62 standardized questionnaires were answered by the aforementioned interviewees. All were valid. Each one of them was composed a network and a non-network part. The network part questionnaire was based on previous similar questionnaires (Bekiari & Digelidis, 2015; Papaioannou, 1998; Bekiari & Hasanagas, 2015, 2016c). However, it was enhanced by the Popitz model of power (1992). Thus, questions relevant to motivation (performance and mastery) and verbal aggressiveness were added. The non-network part of the questionnaire consisted of personal-social parameters related to the individual profile of students (e.g. socio-economic state, age, gender).

Network variables such as degree, indegree, Katz status, pagerank, authority were calculated by the software Visone 1.1 in order to enable a multifaceted structural approach. Afterwards, the software SPSS 16 was used for the conventional statistics; Particularly, Spearman test has been applied in order to reveal correlations between network and non-network variables. This test has been preferred to multivariate analysis, as it provides an overview on all relations (Bekiari & Hasanagas, 2015; Hasanagas & Bekiari, 2015, 2017). Principal Component Analysis has also been used for revealing profiles (typology) of multilateral structures.

### 3. Results and discussion

In **Diagram 1**, examples of networks of three selected dimensions of performance and mastery motivation influence and verbal aggressiveness relations are presented. The network of mastery motivation influence (particularly, learning pedagogy and psychology) is noticeably denser (3.7%) than the other two networks (0.7% and 0.6%). This is understandable as the performance influence and verbal aggressiveness necessitate much more fanaticism or familiarity among students while the mastery influence appears in milder and everyday situations which are more common. Under normal university conditions, it could be improbable that performance influence and verbal aggressiveness would be the dominant ones, as such situation would be unbearable by the students and

**Diagram 1.** Examples of networks of university class, 3<sup>rd</sup> semester, at the department of physical education, University of thessaly, Greece, 2016.



insupportable by the instructors. Such considerable differences of density between relations are normal to appear, as previous studies have shown (Bekiari & Spyropoulou, 2016; Bekiari, Theoharis, Hasanagas, Kefalas, & Vasilou, 2015; Theoharis & Bekiari, 2016a, 2016b).

### 3.1. Mastery Motivation Influence

In **Table 1**, students with high grade seem to be mostly central (in term of general degree). This can be attributed to the fact that a student who seeks high performance in examinations tends both to be eager for learning by others and also to be much in demand by others who trust his advice. Inversely, such a student utilizes the knowledge of other students and transfers it to others, increasing therewith his knowledge capacity. On the contrary, those who are interested in becoming distinct professionals in physical education seem rather not to be interested in transferring knowledge relevant to psychology, sociology and pedagogy. This is understandable, as these disciplines are regarded by many students as basic rather than applied.

In **Table 2**, the total degree in stimulating for learning biology seems to be enhanced by the property of teaching staff. In biological subjects, the instructors are often asked by students as well as by each other, because very specific knowledge is necessary. They also may ask even students during the course in order to understand their way of thinking and to formulate the course content. Being teaching staff appears to play a distinctive role in such a stimulation in contrast to case of pedagogic-psychological field, where to be just a student or an instructor does not play any role in stimulating (the coefficient is insignificant and therefore it is not presented in **Table 1** at all). This difference can be understood as a result of the fact that biology is a quite specific and laboratory-based field, in contrast to pedagogy and psychology, which are much closer to the everyday experience and to the personal interests of everyone. This general centrality degree is strengthened with the age and the experience of travelling abroad. This is understandable considering the relevance of accumulating a wide variety of experience. Simultaneously, the interest in just becoming professionally successful in physical education reduces the interest in collecting wider knowledge from the biological field. This can be seen as the classical incompatibility between widening mental horizons and practical achievement, science and market, “basic” and “applied”, “theoretical” and “realistic”. The same applies also to indegree,

**Table 1.** Stimulus for learning pedagogic-psychological issues.

	Learning pedagogy/ psychology_degree	Learning pedagogy/ psychology_pagerank
Average grade in courses up to now	<b>0.340(*)</b>	0.178
	<b>0.027</b>	0.258
Desire for distinction as a professional	-0.181	<b>-0.318(*)</b>
	0.252	<b>0.040</b>

\*Correlation is significant at the 0.05 level (2-tailed).

**Table 2.** Stimulus for learning biological issues.

	Learning biological subjects_degree	Learning biological subjects_indegree	Learning biological subjects_status	Learning biological subjects_pagerank	Learning biological subjects_authority
Property (student = 0, instr = 1)	<b>0.334(**)</b>	0.197	0.181	0.156	0.234
	<b>0.006</b>	0.113	0.146	0.211	0.059
birth_year	<b>-0.307(*)</b>	-0.162	-0.161	-0.107	-0.275
	<b>0.040</b>	0.288	0.291	0.483	0.067
Rural reside	-0.141	-0.231	-0.228	-0.200	<b>-0.336(*)</b>
	0.350	0.122	0.127	0.182	<b>0.022</b>
Urban reside	0.141	0.231	0.228	0.200	<b>0.336(*)</b>
	0.350	0.122	0.127	0.182	<b>0.022</b>
Have not traveled at all	<b>-0.296(*)</b>	-0.229	-0.241	-0.259	-0.237
	<b>0.046</b>	0.125	0.107	0.082	0.113
Have traveled for sport reasons	0.192	0.243	0.254	0.211	<b>0.338(*)</b>
	0.200	0.103	0.088	0.159	<b>0.022</b>
Desire for distinction as a professional	<b>-0.316(*)</b>	<b>-0.308(*)</b>	<b>-0.324(*)</b>	<b>-0.324(*)</b>	-0.253
	<b>0.041</b>	<b>0.047</b>	<b>0.036</b>	<b>0.037</b>	0.106

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

status and pagerank. The authority in stimulating for learning biology seems to depend on the rural or urban origin and traveling abroad for sport reasons. The students originating from urban places as well as those who have experience of traveling for sport reasons seem to be distinguished in stimulating others in biological issues in term of authority. This can be regarded as a result of presenting a wide range of stimuli and ambitions (e.g. further studying and career). Apparently for similar reasons, students who have also traveled abroad by plane for sport reasons possessed also a distinct authority position in inspiring others interest in learning biology. Similar results have been proposed by previous studies (Bekiari & Hasanagas, 2015; Bekiari, Deliligka & Koustelios, 2017).

Just as in **Table 2**, so in **Table 3**, being teaching staff seems to enhance the general degree (and other indicators such as indegree, status, pagerank) while the mere desire of professional success decreases the general degree as well as the authority. The reasons seem to be similar with these explained in **Table 2**. As for the indegree (occasional stimulating), male students seem to be more influential than the female ones. This could be regarded as a verification of the assumption that the sport is still perceived as a male-dominated field, where corporal strength is a main determinant. Similar results appear also in deeper structures depicted by status, pagerank and authority. Travel experience related to sport

**Table 3.** Stimulus for learning sport issues.

	Learning sport subjects_degree	Learning sport subjects_indegree	Learning sport subjects_status	Learning sport subjects_pagerank	Learning sport subjects_authority
Being student (=0) or instructor (=1)	<b>0.264(*)</b>	<b>0.333(**)</b>	<b>0.317(**)</b>	<b>0.361(**)</b>	0.237
	<b>0.032</b>	<b>0.006</b>	<b>0.010</b>	<b>0.003</b>	0.055
Desire for distinction as a professional	<b>-0.323(*)</b>	-0.298	-0.304	-0.264	<b>-0.328(*)</b>
	<b>0.037</b>	0.055	0.050	0.091	<b>0.034</b>
Gender	-0.174	<b>-0.271(*)</b>	<b>-0.263(*)</b>	<b>-0.267(*)</b>	<b>-0.273(*)</b>
	0.163	<b>0.028</b>	<b>0.033</b>	<b>0.030</b>	<b>0.026</b>
Have traveled for sport reasons	0.146	<b>0.334(*)</b>	<b>0.324(*)</b>	<b>0.338(*)</b>	0.281
	0.333	<b>0.023</b>	<b>0.028</b>	<b>0.022</b>	0.058
The subject content is important for being interested	0.243	<b>0.368(*)</b>	<b>0.391(**)</b>	<b>0.344(*)</b>	<b>0.382(**)</b>
	0.104	<b>0.012</b>	<b>0.007</b>	<b>0.019</b>	<b>0.009</b>
Being interested in medical subjects	-0.095	-0.278	<b>-0.294(*)</b>	<b>-0.338(*)</b>	-0.213
	0.528	0.061	<b>0.048</b>	<b>0.022</b>	0.155

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

activity strengthens the potential of stimulating others in sport learning at occasional (indegree) and deeper level (status, pagerank, authority), as they have to describe interesting situations and incidents and possibly to represent an attractive value system (championship, international cooperation and distinction in sport etc). Also, students who are stimulated for a study subject only (or mainly) by the subject itself (and not e.g. by the personality of the teaching staff or other parameters), have apparently perceived the subject quite “purely” and insightfully and, thus, they are able to inspire interest also to the others. Finally, students especially interested medicinal subjects are rather unable to stimulate others in sport issues. This can be perceived as a result of the contextual deficit between medicinal and sport subjects. The medicine is demanding in meticulous reading and studying of texts while sport subjects are based on corporal exercise rather than on reading. Thus, students interested in medicinal subjects are normally dedicated to books and cannot stimulate others to deal with sport.

### 3.2. Performance Motivation Influence

In **Table 4**, the first finding which should be emphasized is that the property (being student or instructor) does not appear in the parameters of this table because it proved to insignificant for the motivation for improvement. In other words, it is questionable to what extent the formal structure “instructor-student” plays a substantial role in the motivation climate. Thus, at least at the level of



**Table 4.** Stimulus for improvement.

	Courage for improvement_degree	Courage for improvement_indegree	Courage for improvement_status	Courage for improvement_pagerank	Courage for improvement_authority
Gender (male = 0, female = 1)	0.114	<b>0.286(*)</b>	<b>0.268(*)</b>	<b>0.270(*)</b>	0.167
	0.364	<b>0.020</b>	<b>0.030</b>	<b>0.028</b>	0.180
Height	-0.222	<b>-0.310(*)</b>	<b>-0.313(*)</b>	<b>-0.317(*)</b>	-0.220
	0.138	<b>0.036</b>	<b>0.034</b>	<b>0.032</b>	0.142
Weight	-0.194	<b>-0.385(**)</b>	<b>-0.387(**)</b>	<b>-0.373(*)</b>	<b>-0.294(*)</b>
	0.197	<b>0.008</b>	<b>0.008</b>	<b>0.011</b>	<b>0.047</b>
Average grade in courses up to now	0.188	<b>0.384(*)</b>	<b>0.380(*)</b>	<b>0.496(**)</b>	0.167
	0.233	<b>0.012</b>	<b>0.013</b>	<b>0.001</b>	0.291
Have traveled for sport reasons	-0.087	-0.265	<b>-0.295(*)</b>	<b>-0.280</b>	-0.212
	0.564	0.075	<b>0.047</b>	<b>0.059</b>	0.156
Inspire interest to other students for the courses	<b>0.307(*)</b>	0.114	0.171	0.142	0.048
	<b>0.038</b>	0.449	0.257	0.347	0.752

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

social structure analysis, an extension of the motivation research beyond the property of the instructors seems to make sense. The gender seems to influence the motivation climate, as female seem to stimulate for improvement. This could be attributed to the fact that male students are motivated to impress female ones with their high performance. The physical appearance is also of importance for the motivation in physical education, as tall individuals seem to discourage others from being improved. This can be explained by the fact that the not tall students regard as impossible to reach the performance of tall ones in several sports. This is understandable as being tall does not depend on training but only on the individual nature of each student. The over-weighted individuals seem also to discourage others, as they cannot function as an ideal for the others in sports necessitating flexibility and rapidness and, on the other hand, they are unbeatable in sports which require strength. Thus, being over-weighted is in any case discouraging, either as negative archetype or as an unsurpassable advantage. In contrast to the extreme individual nature (tall or over-weighted), high student's grade seems to encourage others to improve their performance. The high grade depicts a valuing interest and diligence in the study subject which may only positively exemplify others. Simultaneously, high grade is achievable by anyone through personal try and time investment, in contrast to corporal nature. Traveling abroad by plane for sport reasons is often connected with seeking championship. Thus, such students cannot encourage others to improve their

performance, because their performance is so high that it looks unreachable. Those who believe that they inspire interest to the others regarding the study subjects, they seem really to achieve that, as they present high degree. This increased degree means that they are also inspired by the others. Thus, such persons contribute to the motivation climate also with their personal example.

In **Table 5**, it is noticeable that the high education level of the parents (specifically of the mother) make the students not stimulate their mates to surpass performance limits and become more competitive in sports. This can be attributed

**Table 5.** Stimulus for surpassing.

	Stimulus for surpassing_degree	Stimulus for surpassing_indegree	Stimulus for surpassing_outdegree	Stimulus for surpassing_status	Stimulus for surpassing_pagerank	Stimulus for surpassing_authority
Mother education level	<b>-0.330(*)</b>	<b>-0.291(*)</b>	-0.128	<b>-0.315(*)</b>	<b>-0.292(*)</b>	-0.271
	<b>0.025</b>	<b>0.050</b>	0.395	<b>0.033</b>	<b>0.049</b>	0.069
Average grade in courses up to now	0.276	0.169	0.072	0.187	0.181	<b>0.366(*)</b>
	0.077	0.286	0.652	0.236	0.251	<b>0.017</b>
In how many courses from past semesters you still should be examined	<b>-0.384(*)</b>	-0.264	-0.268	-0.218	-0.207	-0.126
	<b>0.012</b>	0.091	0.086	0.165	0.188	0.428
Discrete absense from the school	0.108	0.039	0.098	-0.010	-0.012	<b>-0.328(*)</b>
	0.496	0.807	0.537	0.951	0.939	<b>0.034</b>
Using internet for entertainment	-0.093	-0.181	-0.076	-0.242	-0.239	<b>-0.449(**)</b>
	0.537	0.230	0.618	0.105	0.110	<b>0.002</b>
Have traveled for sport reasons	<b>-0.434(**)</b>	<b>-0.396(**)</b>	-0.202	<b>-0.392(**)</b>	<b>-0.390(**)</b>	-0.203
	<b>0.003</b>	<b>0.006</b>	0.179	<b>0.007</b>	<b>0.007</b>	0.175
Being interested in medical subjects	<b>0.301(*)</b>	<b>0.302(*)</b>	0.139	<b>0.309(*)</b>	<b>0.296(*)</b>	<b>0.324(*)</b>
	<b>0.042</b>	<b>0.041</b>	0.355	<b>0.037</b>	<b>0.046</b>	<b>0.028</b>

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

to the fact that a student who has been brought up by a mother of high education level tends to adopt mental interests and values and not interests related with corporal performance. The high grade is conducive to surpass performance limits for reasons similar to these described in the **Table 4**. On the contrary, those who often fail in the examinations or are absent in the lectures seem to negatively influence the motivation climate. Simultaneously, those who are often absent in the lectures spend this time in internet surfing. Students who travel abroad for sport reasons (normally seeking championship) also exert a negative impact on the motivation of the others to surpass performance limits for reasons similar to these explained in **Table 4**. Finally, students interested in the medicinal subjects tend to be stimulated and to stimulate others to surpass performance limits, as they regard this achievement as a challenge to utilize the medicinal knowledge.

### 3.3. Verbal Aggressiveness

In **Table 6**, the instructors present a noticeable tendency to offend and be offended. This may be attributed to the imperative style needed quite often in sport exercise, especially in organizing and arbitrating team sports. However, they seem to be more offensive than be offended while young students seem to be less offensive, as they still feel not enough self-confident to be involved in offensive actions. The desire to become an eminent professional also seems to discourage offenders, as ambitious students do not approach everyone but they are more selective in companions. Moreover, there seems to exist a certain organization culture at the department which protects such ambitions against offenses. In general, the expressed offensiveness (outdegree) seems to be restricted by the education level of their parents, particularly of the mother. Travelling abroad for sport reasons makes someone more offensive to others, as it enhances his image. Using internet for entertainment makes someone less offensive, as he is relaxed by this. Finally, it is noticeable that students originating from rural areas tend more to become target offenses than students of urban origin. This can be regarded as an evidence of spatial-regional discrimination. These results seem to be in accordance with other studies (Theoharis, Bekiari, & Koustelios, 2017).

In the **Table 7**, again for reasons already discussed in **Table 6**, instructors tend to be target for deriding but they are much more deriding to others. Students from rural areas tend to deride and be derided while students from urban areas seems to keep out in general from deriding (neither deride nor be derided). This could be explained as a response to be offended, as shown in **Table 6**. When a student of rural origin experiences the regional discrimination mentioned above, then he reacts to this by deriding. Of course, he is, in turn, derided again and the vicious circle goes on. In contrast to this, students of urban areas do not need to enter such a vicious circle, as they do not become a target from the beginning. Subsequently, the offense described in **Table 6** seems to precede deriding. In other words, offense appears to be the occasion/starting while the deriding the aftermath. Being a target for deriding seems even to be a cause of

**Table 6.** Offense.

	Being offended_degree	Being offended_indegree	Being offended_outdegree	Being offended_status	Being offended_pagerank	Being offended_authority
Property (student = 0, instructor = 1)	<b>0.460(**)</b>	-0.107	<b>0.644(**)</b>	-0.107	-0.107	-0.055
	<b>0.000</b>	0.392	<b>0.000</b>	0.393	0.393	0.659
birth_year	-0.225	0.127	<b>-0.295(*)</b>	0.133	0.127	0.094
	0.138	0.405	<b>0.049</b>	0.383	0.406	0.537
Desire for distinction as a professional	-0.282	<b>-0.401(**)</b>	0.113	<b>-0.388(*)</b>	<b>-0.359(*)</b>	<b>-0.563(**)</b>
	0.070	<b>0.009</b>	0.476	<b>0.011</b>	<b>0.020</b>	<b>0.000</b>
Childhood in rural area	0.213	0.260	0.152	0.271	<b>0.294(*)</b>	-0.094
	0.156	0.081	0.315	0.069	<b>0.047</b>	0.536
Childhood in urban area	-0.213	-0.260	-0.152	-0.271	<b>-0.294(*)</b>	0.094
	0.156	0.081	0.315	0.069	<b>0.047</b>	0.536
Mother education level	-0.210	-0.028	<b>-0.302(*)</b>	-0.039	-0.052	0.169
	0.162	0.854	<b>0.041</b>	0.796	0.732	0.261
Have traveled for sport reasons	0.170	-0.223	<b>0.298(*)</b>	-0.222	-0.222	-0.079
	0.259	0.136	<b>0.044</b>	0.137	0.137	0.604
Using internet for entertainment	-0.176	0.147	<b>-0.301(*)</b>	0.147	0.147	0.052
	0.243	0.328	<b>0.042</b>	0.329	0.329	0.732

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

being absent in courses. The higher the economic state of the family is, the more deriding one becomes to the others. Thus, materialistic differences seem to be a basis of abusive superiority feeling.

### 3.4. Proposing a Typology of Profiles

A typology of profiles combining motivation influence and becoming a target of various forms of verbal aggression is presented in **Table 8**. The first type is the profile of the “invulnerable motivator”. This is a quite influential person in inspiring others the ideal of learning and surpassing others. Both mastery and performance climate seem to be achieved by this profile. Although mastery (related to learning) and performance (related to ego) seem to differ from each other, as deep-rooted skill development and superficial efficiency, and also seem to be induced by completely different motives, they co-exist at this profile. Thereby, a person with such a profile can reasonably be expected: 1) either to inspire

**Table 7.** Deriding.

	Deriding_degree	Deriding_indegree	Deriding_outdegree	Deriding_status	Deriding_pagerank	Deriding_authority
Property (student = 0, instructor = 1)	<b>0.311(*)</b>	-0.055	<b>0.440(**)</b>	-0.052	-0.028	-0.119
	<b>0.011</b>	0.663	<b>0.000</b>	0.676	0.822	0.341
Rural residence	<b>0.342(*)</b>	0.199	<b>0.328(*)</b>	0.242	0.190	<b>0.426(**)</b>
	<b>0.020</b>	0.185	<b>0.026</b>	0.106	0.206	<b>0.003</b>
Urban residence	<b>-0.342(*)</b>	-0.199	<b>-0.328(*)</b>	-0.242	-0.190	<b>-0.426(**)</b>
	<b>0.020</b>	0.185	<b>0.026</b>	0.106	0.206	<b>0.003</b>
Childhood in rural area	<b>0.318(*)</b>	0.188	<b>0.322(*)</b>	0.234	0.184	<b>0.378(**)</b>
	<b>0.031</b>	0.212	<b>0.029</b>	0.118	0.221	<b>0.010</b>
Childhood in urban area	<b>-0.318(*)</b>	-0.188	<b>-0.322(*)</b>	-0.234	-0.184	<b>-0.378(**)</b>
	<b>0.031</b>	0.212	<b>0.029</b>	0.118	0.221	<b>0.010</b>
Discrete absense from the school	0.299	<b>0.306(*)</b>	0.151	<b>0.312(*)</b>	0.249	<b>0.320(*)</b>
	0.054	<b>0.049</b>	0.340	<b>0.044</b>	0.112	<b>0.039</b>
Economic state of family (bad = 0, very good = 3)	0.184	-0.063	<b>0.312(*)</b>	-0.089	-0.108	-0.050
	0.220	0.679	<b>0.035</b>	0.554	0.477	0.742

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

**Table 8.** Typology of motivating and being aggressed.

	The invulnerable motivator	The vulnerable motivator
Learning sport subjects_sum	<b>0.552</b>	-0.135
Learning biological subjects_sum	<b>0.926</b>	-0.130
learn_pedag_psych_sum	<b>0.885</b>	-0.191
Courage for improvement_sum	<b>0.769</b>	<b>0.334</b>
Stimulus for surpassing_sum	<b>0.822</b>	0.047
Being offended_sum	0.053	<b>0.653</b>
Deriding_sum	0.044	<b>0.759</b>

Extraction Method: Principal component analysis. 2 components extracted.

to others a desire for developing knowledge and skills or 2) a desire to be distinct and dominant. In the case a, the deep-learner also becomes challengeable and challenging in order to utilize the newly developed skills. In the case b, the person who desires dominance is obliged to develop skills. Thus, the “invulnerable motivator” seems both to cultivate a climate of mastery or performance though each other. Such a strong type of motivator can only inspire or crate enthusiasm depriving them of any tangible tendency to aggress him. On the contrary, the profile of the “vulnerable motivator” is someone who encourages others to im-

prove their performance, becoming, however, himself a target of verbal aggressiveness. This can be attributed to that he implies directly or indirectly shortcomings of others which necessitate improvement. Thus, the “vulnerable motivator” is a type provoking rather than inspiring.

In **Table 9**, two types of general involvement are revealed. The “strong motivator” achieves all possible forms of motivation climate measured in this study. However, he is not so invulnerable as in the **Table 8**. He becomes a target of deriding and also derides others. This is a natural result, considering the constellation of (mutual) interactions as a whole, and not only the received actions as in the **Table 8**. The whole of interactions is a more realistic depiction of the reality than the received actions only. In this realistic whole, there can exist a motivator strong but not invulnerable and, of course, not above any aggression. Simultaneously, there also appears the merely “brawler” type. This type is not conducive to the motivation climate at all while his involvement in mutual verbal aggression is his only clearly revealed characteristic. Similar results have been proposed by previous studies (Bekiari & Spyropoulou, 2016; Bekiari & Petanidis, 2016; Hasanagas & Bekiari, 2015, 2017).

#### 4. Conclusion

Mastery influence is a more common situation than influence aiming at performance and verbal aggressiveness which necessitate fanaticism or familiarity. Students with high grade are quite central in influencing and being influenced for learning pedagogic-psychological issues. Desire for professional distinction in physical education seems to be negatively correlated with such mastery influence. In the case of learning biology (mastery), the teaching staff is the main stimulator in contrast to case of pedagogic-psychological field, as biology is a specific and laboratory-based field and not simply based on everyday experience or on personal approaches. The age and the experience of travelling abroad is also conducive to learning biology, as it is related with the variety of experience in contrast to the desire of professional success in physical education which reduces the interest in biological field, as professional success is considered to depend on practical and not on scientific parameters. Students originating from

**Table 9.** General typology of motivation and verbal aggression.

	The strong motivator	The brawler
Learning pedagogy/psychology_degree	<b>0.894</b>	-0.168
Learning biological subjects_degree	<b>0.902</b>	-0.123
Learning sport subjects_degree	<b>0.742</b>	0.055
Courage for improvement_degree	<b>0.580</b>	-0.212
Stimulus for surpassing_degree	<b>0.737</b>	-0.153
Being offended_degree	0.245	<b>0.805</b>
Deriding_degree	<b>0.348</b>	<b>0.743</b>

Extraction Method: Principal component analysis. 2 components extracted.

urban places or having experience of traveling for sport reasons seem to be distinguished in stimulating others in biological issues, as they present a wide range of stimuli and ambitions. The same stands in part also for learning sport issues. Male students seem to be more influential than the female ones, as the sport is still perceived as a male-dominated field. Students interested in medicinal subjects are rather unable to stimulate others in sport issues, as there is a contextual deficit between medicinal and sport subjects. Female students seem to stimulate for improvement, as male students are motivated to impress female ones with their high performance. Physical appearance is also of importance for the motivation in physical education. High student's grade seems also to encourage others to improve their performance. Traveling abroad by plane for sport reasons is often connected with seeking championship. The high education level of the parents (specifically of the mother) makes the students not stimulate their mates to surpass performance limits, as they adopt mental interests. The high grade is also conducive to surpass performance limits. Travel abroad for sport reasons exerts a negative impact on the motivation of the others. Students interested in the medicinal subjects tend to be stimulated and to stimulate others to surpass performance limits, as they regard this achievement as a challenge to utilize the medicinal knowledge. The instructors present a noticeable tendency to offend and be offended to the imperative style needed quite often in sport exercise. The desire for professional eminence also seems to discourage offenders. There seems to exist a certain organization culture at the department which protects such ambitions against offenses. Offensiveness seems to be restricted by the education level of parents and the internet entertainment. Travelling abroad for sport reasons increases offensiveness. Students originating from rural areas tend more to become target of offenses, indicating thus spatial-regional discrimination. However, when a student of rural origin experiences the regional discrimination mentioned above, then he reacts to this by deriding. Of course, he is, in turn, derided again. Offense appears to be the occasion/starting while the deriding the aftermath. Being a target for deriding seems even to be a cause of being absent in courses. Students of higher economic state are more deriding. Thereby, economic differences seem to be a source of abusive superiority feeling. The proposed typology of motivation influence and being aggressed includes the "invulnerable motivator" who is a quite influential person in motivating for mastery or performance and the "vulnerable motivator" who encourages others to improve their performance, provoking rather than inspiring. The proposed typology of general involvement (mutuality in terms of in- and out-degree) included the profile of "strong motivator" who is involved in all forms of motivation climate but also in deriding and the "brawler" type who is only involved in verbal aggression.

## References

- Aloia, L. S., & Solomon, D. H. (2016). Emotions Associated with Verbal Aggression Expression and Suppression. *Western Journal of Communication, 80*, 3-20.  
<https://doi.org/10.1080/10570314.2014.943428>

- Ames, C. (1992). Classrooms: Goals, Structures, and Student Motivation. *Journal of educational psychology, 84*, 261-271. <https://doi.org/10.1037/0022-0663.84.3.261>
- Ames, C., & Archer, J. (1988). Achievement Goals in the Classroom: Students' Learning Strategies and Motivation Processes. *Journal of Educational Psychology, 80*, 260-267. <https://doi.org/10.1037/0022-0663.80.3.260>
- Atkins, M. R., Johnson, D. M., Force, E. C., & Petrie, T. A. (2015). Peers, Parents, and Coaches, oh My! The Relation of the Motivational Climate to Boys' Intention to Continue in Sport. *Psychology of Sport and Exercise, 16*, 170-180. <https://doi.org/10.1016/j.psychsport.2014.10.008>
- Avtgis, T. A., & Rancer, A. S. (2008). The Relationship between Trait Verbal Aggressiveness and Teacher Burnout Syndrome in K-12 Teachers. *Communication Research Reports, 25*, 86-89. <https://doi.org/10.1080/08824090701831875>
- Bekiari, A. (2012). Perceptions of Instructors' Verbal Aggressiveness and Physical Education Students' Affective Learning. *Perceptual and Motor Skills, 115*, 325-335. <https://doi.org/10.2466/06.11.16.PMS.115.4.325-335>
- Bekiari, A. (2014). Verbal Aggressiveness and Leadership Style of Sports Instructors and their Relationship with Athletes' Intrinsic Motivation. *Creative Education, 5*, 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*, 90-110. <https://doi.org/10.19044/esj.2016.v12n25p90>
- Bekiari, A., & Hasanagas, N. (2015). Verbal Aggressiveness Exploration through Complete Social Network Analysis: Using Physical Education Students' Class as an Illustration. *International Journal of Social Science Studies, 3*, 30-49. <https://doi.org/10.11114/ijsss.v3i3.729>
- Bekiari, A., & Hasanagas, N. (2016a). "Educating" in Physical Education. *Theoretical Approaches and Practical Inquiries*. Thessaloniki: Afoi Kyriakidi Editions SA.
- Bekiari, A., & Hasanagas, N. (2016b). *Sociological Insights in the Education System: "Unlocking" the Power Relations*. Thessaloniki: Afoi Kyriakidi Editions SA.
- Bekiari, A., & Hasanagas, N. (2016c). Suggesting Indicators of Superficiality and Purity in Verbal Aggressiveness. An Application in Adult Education Class Networks of Prisoners. *Open Journal of Social Sciences, 4*, 279-292. <https://doi.org/10.4236/jss.2016.43035>
- Bekiari, A., & Manoli, P. (2016). EFL Teacher Verbal Aggressiveness and Argumentativeness and Student Socio-Affective Strategy Use and Affective Learning: Exploring Possible Associations. *Journal of Teacher Education and Educators, 5*, 154-171.
- Bekiari, A., & Petanidis, D. (2016). Exploring Teachers' Verbal Aggressiveness through Interpersonal Attraction and Students' Intrinsic Motivation. *Open Journal of Social Sciences, 4*, 72-85. <https://doi.org/10.4236/jss.2016.412007>
- Bekiari, A., & Pylarinou, M. (2017). Instructor Argumentativeness and Socio-Communicative Style and Student Discipline: Using Physical Education Students' Class as an Illustration. *Open Journal of Social Sciences*, Forthcoming.
- Bekiari, A., & Sakellariou, K. (2003). Perceived Instructor Verbal Aggressiveness and Student State Learning in Physical Education. *Italian Journal of Sport Sciences, 1*, 251-256.
- 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*, 145-155. <https://doi.org/10.4236/jss.2016.46016>
- Bekiari, A., & Tsaggopoulou, T. (2016). Verbal Aggressiveness and Affective Learning in



- Physical Education. *Advances in Physical Education*, 6, 406-418.  
<https://doi.org/10.4236/ape.2016.64041>
- Bekiari, A., & Tsiana, I. (2016). Exploring Instructors' Verbal Aggressiveness and Students' Personal Orientations and Reasons of Discipline in Physical Education Class. *Advances in Physical Education*, 6, 158-168. <https://doi.org/10.4236/ape.2016.63018>
- Bekiari, A., Digelidis, N. (2015). Measuring Verbal Aggressiveness in Sport and Education. *International Journal of Physical Education*, 52, 12-21.
- Bekiari, A., Digelidis, N., & Sakellariou, K. (2006). Perceived Verbal Aggressiveness of Coaches in Volleyball and Basketball: A Preliminary Study. *Psychological Reports*, 103, 526-530.
- Bekiari, A., Kokaridas, D., & Sakellariou, K. (2005). Verbal Aggressiveness of Physical Education Teachers and Students' Self-Reports of Behaviour. *Psychological Reports*, 96, 493-498. <https://doi.org/10.2466/pr0.96.2.493-498>
- Bekiari, A., Kokaridas, D., & Sakellariou, K. (2006). Associations of Students' Self-Reports of Their Teacher's Verbal Aggression, Intrinsic Motivation, and Perceptions of Reasons for Discipline in Greek Physical Education Classes. *Psychological Reports*, 98, 451-461. <https://doi.org/10.2466/pr0.98.2.451-461>
- Bekiari, A., Koustelios, A., & Sakellariou, K. (2000). Instructors' Verbal Aggressiveness from Universities in Greece. *Studi e Ricerche*, 5, 225-232.
- Bekiari, A., Patsiaouras, A., Kokaridas, D., & Sakellariou, K. (2006). The Relationship between Verbal Aggressiveness and State Anxiety in Volleyball. *Psychological Reports*, 99, 630-634.
- Bekiari, A., Perkos, S., & Gerodimos, V. (2015). Verbal Aggression in Basketball: Perceived Coach Use and Athlete Intrinsic and Extrinsic Motivation. *Journal of Physical Education and Sport*, 15, 96-102.
- Bekiari, A., Sympas, I. (2015). Coaches' Verbal Aggressiveness and Motivational Climate as Predictors of Athletes' Satisfaction. *British Journal of Education, Society & Behavioural Science*, 9, 318-329. <https://doi.org/10.9734/BJESBS/2015/17757>
- Bekiari, A., Hasanagas, N., Theoharis, D., Kefalas, I., & Vasilou, A. (2015). The Role of Mathematical Object and the Educational Environment to Students' Interpersonal Relationships: An Application of Full Social Network Analysis. In *Proceedings of the 32nd Congress Greek Mathematical Society (with International Participation)*, Kastoria (pp. 799-812). Athens: Hellenic Mathematical Society.
- Beltman, S., & Volet, S. (2007). Exploring the Complex and Dynamic Nature of Sustained Motivation. *European Psychologist*, 12, 314-323. <https://doi.org/10.1027/1016-9040.12.4.314>
- Bengoechea, E. G., & Streaan, W. B. (2007). On the Interpersonal Context of Adolescents' Sport Motivation. *Psychology of Sport and Exercise*, 8, 195-217. <https://doi.org/10.1016/j.psychsport.2006.03.004>
- Bortoli, L., Bertollo, M., Vitali, F., Filho, E., & Robazza, C. (2015). The Effects of Motivational Climate Interventions on Psychobiosocial States in High School Physical Education. *Research Quarterly for Exercise and Sport*, 86, 196-204. <https://doi.org/10.1080/02701367.2014.999189>
- Braithwaite, R., Spray, C. M., & Warburton, V. E. (2011). Motivational Climate Interventions in Physical Education: A Meta-Analysis. *Psychology of Sport and Exercise*, 12, 628-638. <https://doi.org/10.1016/j.psychsport.2011.06.005>
- Cervelló, E. M., & Santos-Rosa, F. J. (2001). Motivation in Sport: An Achievement Goal Perspective in Young Spanish Recreational Athletes. *Perceptual and Motor Skills*, 92, 527-534. <https://doi.org/10.2466/pms.2001.92.2.527>

- Claus, C. J., Booth-Butterfield, M., & Chory, R. M. (2012). The Relationship between Instructor Misbehaviors and Student Antisocial Behavioral Alteration Techniques: The Roles of Instructor Attractiveness, Humor, and Relational Closeness. *Communication Education, 61*, 161-183. <https://doi.org/10.1080/03634523.2011.647922>
- Cumming, S. P., Smoll, F. L., Smith, R. E., & Grossbard, J. R. (2007). Is Winning Everything? The Relative Contributions of Motivational Climate and Won-Lost Percentage in Youth Sports. *Journal of Applied Sport Psychology, 19*, 322-336. <https://doi.org/10.1080/10413200701342640>
- Cunningham, G. B., & Xiang, P. (2008). Testing the Mediating Role of Perceived Motivational Climate in the Relationship between Achievement Goals and Satisfaction: Are These Relationships Invariant across Sex? *Journal of Teaching in Physical Education, 27*, 192-204. <https://doi.org/10.1123/jtpe.27.2.192>
- Donovan, K. L., & Brassard, M. R. (2011). Trajectories of Maternal Verbal Aggression across the Middle School Years: Associations with Negative View of Self and Social Problems. *Child abuse & neglect, 35*, 814-830. <https://doi.org/10.1016/j.chiabu.2011.06.001>
- Edwards, C., & Myers, S. A. (2007). Perceived Instructor Credibility as a Function of Instructor Aggressive Communication. *Communication Research Reports, 24*, 47-53. <https://doi.org/10.1080/08824090601128141>
- Granero-Gallegos, A., Baena-Extremuera, A., Gómez-López, M., & Abraldes, J. A. (2014). Importance of Physical Education: Motivation and Motivational Climate. *Procedia—Social and Behavioral Sciences, 132*, 364-370. <https://doi.org/10.1016/j.sbspro.2014.04.323>
- Hamilton, M. A., Buck, R., Chory, R. M., Beatty, M. J., & Patrylak, L. (2008). Individualistic and Cooperative Affect Systems as Determinants of Aggressive or Collaborative Message Choice. In M. Beatty, J. McCroskey, & K. Floyd (Eds.), *Advances in Communication Research: Biological Perspectives* (pp. 227-250). Cresskill, NJ: Hampton Press.
- Hamilton, M., & Hample, D. (2011). Testing Hierarchical Models of Argumentativeness and Verbal Aggressiveness. *Communication Methods and Measures, 5*, 250-273. <https://doi.org/10.1080/19312458.2011.596991>
- Hasanagas, N., & Bekiari, A. (2015). Depicting Determinants and Effects of Intimacy and Verbal Aggressiveness Target through Social Network Analysis. *Sociology Mind, 5*, 162-175. <https://doi.org/10.4236/sm.2015.53015>
- Hasanagas, N., & Bekiari, A. (2017). An Exploration of the Relation between Hunting and Aggressiveness: Using Inmates Networks at Prison Secondary School as an Illustration. *Social Networking, 6*, 19-37. <https://doi.org/10.4236/sn.2017.61002>
- Hassandra, M., Bekiari, A., & Sakellariou, K. (2007). Physical Education Teacher's Verbal Aggression and Student's Fair Play Behaviors. *The Physical Educator, 64*, 94-101.
- Infante, D. A. (1987). *Aggressiveness*. In J. C. McCroskey, & J. A. Daly (Eds.), *Personality and Interpersonal Communication* (pp. 157-192). Newbury Park, CA: Sage.
- Infante, D. A., & Rancer, A. S. (1982). A Conceptualization and Measure of Argumentativeness. *Journal of Personality Assessment, 46*, 72-80. [https://doi.org/10.1207/s15327752jpa4601\\_13](https://doi.org/10.1207/s15327752jpa4601_13)
- Infante, D. A., & Rancer, A. S. (1993). Relations between Argumentative Motivation, and Advocacy and Refutation on Controversial Issues. *Communication Quarterly, 41*, 415-426. <https://doi.org/10.1080/01463379309369902>
- Infante, D. A., & Rancer, A. S. (1996). Argumentativeness and Verbal Aggressiveness: A Review of Recent Theory and Research. *Annals of the International Communication Association, 19*, 319-352. <https://doi.org/10.1080/23808985.1996.11678934>
- Infante, D. A., & Wigley, C. J. (1986). Verbal Aggressiveness: An Interpersonal Model and

- Measure. *Communications Monographs*, 53, 61-69.  
<https://doi.org/10.1080/03637758609376126>
- Infante, D. A., Riddle, B. L., Horvath, C. L., & Tumlin, S. A. (1992). Verbal Aggressiveness: Messages and Reasons. *Communication Quarterly*, 40, 116-126.  
<https://doi.org/10.1080/01463379209369827>
- Johnson, A. J., Becker, J. A., Wigley, S., Haigh, M. M., & Craig, E. A. (2007). Reported Argumentativeness and Verbal Aggressiveness Levels: The Influence of Type of Argument. *Communication Studies*, 58, 189-205.  
<https://doi.org/10.1080/10510970701341154>
- Kavussanu, M., & Harnisch, D. L. (2000). Self-Esteem in Children: Do Goal Orientations Matter? *British Journal of Educational Psychology*, 70, 229-242.  
<https://doi.org/10.1348/000709900158074>
- Kavussanu, M., & Roberts, G. C. (2001). Moral Functioning in Sport: An Achievement Goal Perspective. *Journal of Sport and Exercise Psychology*, 23, 37-54.  
<https://doi.org/10.1123/jsep.23.1.37>
- Keegan, R. J., Harwood, C. G., Spray, C. M., & Lavallee, D. E. (2009). A Qualitative Investigation Exploring the Motivational Climate in Early Career Sports Participants: Coach, Parent and Peer Influences on Sport Motivation. *Psychology of Sport and Exercise*, 10, 361-372. <https://doi.org/10.1016/j.psychsport.2008.12.003>
- Keegan, R., Spray, C., Harwood, C., & Lavallee, D. (2010). The Motivational Atmosphere in Youth Sport: Coach, Parent, and Peer Influences on Motivation in Specializing Sport Participants. *Journal of Applied Sport Psychology*, 22, 87-105.  
<https://doi.org/10.1080/10413200903421267>
- Kikas, E., Peets, K., Tropp, K., & Hinn, M. (2009). Associations between Verbal Reasoning, Normative Beliefs about Aggression, and Different Forms of Aggression. *Journal of Research on Adolescence*, 19, 137-149.  
<https://doi.org/10.1111/j.1532-7795.2009.00586.x>
- Le Bars, H., Gernigon, C., & Ninot, G. (2009). Personal and Contextual Determinants of Elite Young Athletes' Persistence or Dropping out over Time. *Scandinavian Journal of Medicine & Science in Sports*, 19, 274-285.  
<https://doi.org/10.1111/j.1600-0838.2008.00786.x>
- Liukkonen, J., Barkoukis, V., Watt, A., & Jaakkola, T. (2010). Motivational Climate and Students' Emotional Experiences and Effort in Physical Education. *The Journal of Educational Research*, 103, 295-308. <https://doi.org/10.1080/00220670903383044>
- Maehr, M. L., & Nicholls, J. G. (1980). Culture and Achievement Motivation: A Second Look. In N. Warren (Ed.), *Studies in Cross-Cultural Psychology* (Vol. 2, pp. 221-267). New York: Academic Press.
- Manoli, P., & Bekiari, A. (2015). EFL Teachers' Verbal Aggressiveness and Students' Intrinsic Motivation and Social-Affective Strategy Use: Investigating Possible Relations. *Advances in Research*, 5, 1-13. <https://doi.org/10.9734/AIR/2015/19692>
- Martin, M. M., & Myers, S. A. (2006). Students' Communication Traits and Their Out-of-Class Communication with Their Instructors. *Communication Research Reports*, 23, 283-289. <https://doi.org/10.1080/08824090600962599>
- Mazer, J. P., & Stowe, S. A. (2016). Can Teacher Immediacy Reduce the Impact of Verbal Aggressiveness? Examining Effects on Student Outcomes and Perceptions of Teacher Credibility. *Western Journal of Communication*, 80, 21-37.  
<https://doi.org/10.1080/10570314.2014.943421>
- Murcia, J. A. M., Camacho, A. S., & Rodríguez, J. M. M. (2008). Prognostic of the Perceived Competence through Motivation in Practitioners of Physical Exercise. *Fitness and Performance Journal*, 7, 357-365. <https://doi.org/10.3900/fpj.7.6.357.e>

- Myers, S. A. (2001). Perceived Instructor Credibility and Verbal Aggressiveness in the College Classroom. *Communication Research Reports*, 18, 354-364. <https://doi.org/10.1080/08824090109384816>
- Myers, S. A., & Rocca, K. A. (2001). Perceived Instructor Argumentativeness and Verbal Aggressiveness in the College Classroom: Effects on Student Perceptions of Climate, Apprehension, and State Motivation. *Western Journal of Communication*, 65, 113-137. <https://doi.org/10.1080/10570310109374696>
- Myers, S.A., Edwards, C., Wahl, S.T., & Martin, M.M. (2007). The Relationship between Perceived Instructor Aggressive Communication and College Student Involvement. *Communication Education*, 56, 495-508. <https://doi.org/10.1080/03634520701466398>
- Nerstad, C. G., Roberts, G. C., & Richardsen, A. M. (2013). Achieving Success at Work: Development and Validation of the Motivational Climate at Work Questionnaire (MCWQ). *Journal of Applied Social Psychology*, 43, 2231-2250. <https://doi.org/10.1111/jasp.12174>
- Nicholls, J. (1984). Conceptions of Ability and Achievement Motivation. In R. Ames, & C. Ames (Eds.), *Research on Motivation in Education: Student Motivation* (Vol. 1, pp. 39-73). New York: Academic Press.
- Nicholls, J. G. (1989). *The Competitive Ethos and Democratic Education*. Cambridge, MA: Harvard University Press.
- Ntoumanis, N., & Biddle, S. J. (1999). A Review of Motivational Climate in Physical Activity. *Journal of Sports Sciences*, 17, 643-665. <https://doi.org/10.1080/026404199365678>
- Ommundsen, Y., & KvalØ, S. E. (2007). Autonomy-Mastery, Supportive or Performance Focused? Different Teacher Behaviours and Pupils' Outcomes in Physical Education. *Scandinavian Journal of Educational Research*, 51, 385-413. <https://doi.org/10.1080/00313830701485551>
- Piko, B. F., & Keresztes, N. (2006). Physical Activity, Psychosocial Health and Life Goals among Youth. *Journal of Community Health*, 31, 136-145. <https://doi.org/10.1007/s10900-005-9004-2>
- Rancer, A. S., & Avtgis, T. A. (2006). *Argumentative and Aggressive Communication: Theory, Research, and Application*. Thousand Oaks, CA: Sage Publications.
- Rancer, A. S., & Avtgis, T. A. (2014). *Argumentative and Aggressive Communication: Theory, Research, and Application* (2nd ed.). New York: Peter Lang.
- Richmond, V. P., McCroskey, J. C., Kearney, P., & Plax, T. G. (1987). Power in the Classroom VII: Linking Behavior Alteration Techniques to Cognitive Learning. *Communication Education*, 36, 1-12. <https://doi.org/10.1080/03634528709378636>
- Roberts, G. C. (2001). Understanding the Dynamics of Motivation in Physical Activity: The Influence of Achievement Goals on Motivational Processes. In G. C. Roberts (Ed.), *Advances in Motivation in Exercise and Sport* (pp. 1-50). Champaign, IL: Human Kinetics.
- Roberts, G. C. (2012). Motivation in Sport and Exercise from an Achievement Goal Theory Perspective: After 30 Years, Where Are We? In G. Roberts, & D. Treasure (Eds.), *Advances in Motivation in Sport and Exercise* (3rd ed., pp. 5-58). Champaign, IL: Human Kinetics.
- Roberts, G. C., Treasure, D., & Conroy, D. E. (2007). Understanding the Dynamics of Motivation in Sport and physical Activity: An Achievement Goal Interpretation. In G. Tenenbaum, & R. Eklund (Eds.), *Handbook of Sport Psychology* (3rd ed., pp. 3-30). Hoboken, NJ: Wiley. <https://doi.org/10.1002/9781118270011.ch1>
- Schrodt, P. (2003). Student Perceptions of Instructor Verbal Aggressiveness: The Influ-

- ence of Student Verbal Aggressiveness and self-Esteem. *Communication Research Reports*, 20, 240-250. <https://doi.org/10.1080/08824090309388822>
- Smith, R. E., Smoll, F. L., & Cumming, S. P. (2007). Effects of a Motivational Climate Intervention for Coaches on Young Athletes' Sport Performance Anxiety. *Journal of sport and exercise psychology*, 29, 39-59. <https://doi.org/10.1123/jsep.29.1.39>
- Syrmpas, I., & Bekiari, A. (2015). The Relationship between Perceived Physical Education Teacher's Verbal Aggressiveness and Argumentativeness with Students' Interpersonal Attraction. *Inquiries in Sport & Physical Education*, 13, 21-32.
- Theoharis, D., & Bekiari, A. (2016a). The Influence of Mathematics and Learning Environment in Verbal Aggressiveness and Interpersonal Relations: A Dynamic Analysis of Social Networks. In *Proceedings of the 8th International Congress Mathematical Society* (pp. 415-428). Athens: Hellenic Mathematical Society.
- Theoharis, D., & Bekiari, A. (2016b). Social Networks Analysis of Centrality: Case Study in Leadership Networks. In *Proceedings of the 33rd Congress Greek Mathematical Society (with International Participation)* (pp. 250-260). Athens: Hellenic Mathematical Society.
- Theoharis, 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*, Forthcoming.
- Vallade, J. I., & Myers, S. A. (2014). Student Forgiveness in the College Classroom: Perceived Instructor Misbehaviors as Relational Transgressions. *Communication Quarterly*, 62, 342-356. <https://doi.org/10.1080/01463373.2014.911767>
- Van De Pol, P. K. C., Kavussanu, M., & Ring, C. (2012). Goal Orientations, Perceived Motivational Climate, and Motivational Outcomes in Football: A Comparison between Training and Competition Contexts. *Psychology of Sport and Exercise*, 13, 491-499. <https://doi.org/10.1016/j.psychsport.2011.12.002>
- Vazou, S., Ntoumanis, N., & Duda, J. L. (2005). Peer Motivational Climate in Youth Sport: A Qualitative Inquiry. *Psychology of Sport and Exercise*, 6, 497-516. <https://doi.org/10.1016/j.psychsport.2004.03.005>
- Weiss, M. R., Amorose, A. J., & Wilko, A. M. (2009). Coaching Behaviors, Motivational Climate, and Psychosocial Outcomes among Female Adolescent Athletes. *Pediatric exercise science*, 21, 475-492. <https://doi.org/10.1123/pes.21.4.475>
- Wrench, J. S., & Punyanunt-Carter, N. M. (2005). Advisor-Advisee Communication Two: The Influence of Verbal Aggression and Humor Assessment on Advisee Perceptions of Advisor Credibility and Affective Learning. *Communication Research Reports*, 22, 303-313. <https://doi.org/10.1080/000368105000317599>
- Yaratan, H., & Uludag, O. (2012). The Impact of Verbal Aggression on Burnout: An Empirical Study on University Students. *Procedia—Social and Behavioral Sciences*, 46, 41-46. <https://doi.org/10.1016/j.sbspro.2012.05.064>



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