

Original Paper

Teaching Using a Face Protection Mask: How Students of 6-15 Years Old Perceive Their Teachers' Expressing Emotions during the Teaching Procedure

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Abstract

One of the basic measures to prevent the Covid-19 infection is the use of a face protection mask by students and teachers in school premises and, mainly, in teaching. A question, however, is whether the covered part of the face is a barrier to the recognition of the expressed emotions of the wearer, a fact that may affect communication and interaction in teaching. On this basis, this article attempts to investigate how 6-15 year olds perceive the emotions of persons wearing a face protection mask. The research was conducted using the Case Study method and an "Emotion Recognition Sheet" in 1st, 3rd & 5th grade of Greek Primary School and in the first three Grades of secondary school (Gymnasium). The participant students were asked to observe photos of adult persons wearing a face mask and then to recognize the emotions of the presented adults. The research findings revealed a 62% failure of the students in recognizing emotions. This fact highlights the need to develop a teaching proposal to deal with this situation, in order to strengthen students' communication ability, which is a key factor in achieving effective learning.

Keywords

teaching, face protection mask, emotions, perception ability, learners

1. Introduction: Recognition of Emotions in People Using a Face Protection Mask (FPM)

Since the start of the Covid-19 pandemic, teaching has been adapted to the necessities of health protection measures. In this context, the Face Protection Mask (FPM) was introduced as a basic protection measure (Fykaris & Kaldi, 2020). The use of FPM forms a special condition of non-verbal communication, by allowing a specifying code of communication signals. More generally, nonverbal communication is a universal language of coded signal recognition (Frank, 2016, pp. 47-48), which includes the signals emitted by the facial muscles (Allwood, 2002, p. 6), which are not visible when a person wears a FPM. Particularly with regard to the emotions, facial expressions seem to play the most important role, because they introduce emotional signals that are captured quickly and directly (Ekman, 2003, p. 58). At the same time, within the context of non-verbal communication, the role of head movements is equally important for the transmission of the message (Marshall, 2001, p. 19, p. 72; Simonds & Cooper, 2013, p. 5; Postic, 2001, pp. 143-145).

The use of FPM depicts the expression of an emotion partially, as the FPM almost completely hides the lower part of the face. In this way, the learners may find it difficult to distinguish the real intention of the teacher's expressing emotion. These deficiencies or misunderstandings may reduce the intended interaction between the participants in teaching procedure (Barmaki, 2014, p. 441). This dimension may create confusion between "what it really is" and "what it appears to be", a fact which may affect the way in which the learners perceive the processes of recognizing the emotions of others, but also the self-regulation of their behavior in relation to their emotions (Fykaris & Kaldi, 2020). The apparent contrast between the truth and the illusion which is created by the use of FPM, may lead to the following consequences:

- a) Learners, who are relatively young, such as those who belong to the 6-15 age group, are led to uncertain emotional experiences, possibly with unpredictable consequences. In particular, the potential disruption of interpersonal communication between learners, but also between teacher and learners, may exacerbate issues of fear and anxiety or even lead to phobias (Herbert, 2005, pp. 151-163; Gottman, 2015, pp. 252-253; Feldman, 2017, pp. 410-411). In addition, the distorted experience of reality in adolescents may increase emotional insecurity and a crucial effect on the formation of the individual's identity, since adolescents consider very seriously the information they receive from others in their tendency to adopt socially acceptable behavioral roles (Feldman, 2017, p. 413).
- b) There is a risk of destabilizing the pedagogical relationship between the teacher and the learners. This relationship is based on the communicative process of interaction. In this interaction, the individual elements of the communication process are determined and controlled, in an attempt to define the content of the communication message (Postic, 2001, pp. 152-153). In this context, the role of the visual communication is extremely important and may determine the outcome of the teaching, while the lack or the obstruction of the communication conditions may implicate on the effectiveness of its work (Fykaris, 2010, pp.

207-209). Moreover, a non-effective nonverbal communication may cause confusion among the learners as to which behavior (and, subsequently, which corresponding reaction) is considered desirable (Rosenthal, 2002, pp. 28-33).

- c) The regularity of the learner's socialization process is affected. The learner forms an opinion about his classmates by observing their behavior and interacting with them. This interaction is based on communicative stimuli which he/she exchanges with them. A problematic non-verbal communication, as in the case of the use of FPM, may cause difficulties in social adaptation, but also phobic emotions (Fykaris & Kaldi, 2020), as well as difficulties in developing appropriate social relationship management skills (Feldman, Tomasian & Coats, 1999, p. 238).
- d) Given that teaching and learning are based on interactive communication (Subandi, Choirundin, Mahmudi, Nizaruddin & Hermanita, 2018, p. 460) the use of FPM makes particularly difficult its smooth conduct and, consequently, the achievement of maximum possible learning results. The partial expression and recognition of emotions as a result of the use of FPM in teaching can affect the achievement of teaching objectives and, consequently, the learning outcomes (Baylor & Kim, 2008, p. 208).

We think that the above arguments clarify that ensuring the effectiveness of communication in teaching is a key-point to the whole procedure. Additionally, it seems that the use of FPM emerges as an obstacle to the communication between teacher and learners. Teaching with the use of FPM is an unprecedented situation, which seems to hinder the expression of non-verbal messages with emotional content. For this reason, it is interesting to investigate the ability of the learners to recognize the emotions of their teachers who use a FPM. The present paper attempts this investigation through case-studies of 6-15 y.o. learners. The next section presents the results of this research.

2. Research Method

2.1 Main Objective of the Research

To investigate the perception ability of the students to recognize the emotions of fear, joy, anger, surprise, disgust, worry, jealousy, sadness and shame in adults who wear a Face Protection Mask (FPM).

2.2 Emotions Selection Criteria

The nine (9) emotions of the research (fear, joy, anger, surprise, disgust, worry, jealousy, sadness and shame) are selected based on their timeliness and frequency of reference in the literature (Ekman, 1992, pp. 172-174; Izard, 1992, pp. 562-564; Griffiths, 2003, pp. 5-7; Saarimäki et al., 2015, pp. 2567-2568; Cherry, 2021, pp. 1-10; Ortony, 2021, pp. 6-8).

2.3 Research Hypothesis

“The students of the reference age participating in the experimental group have the ability to recognize the emotions expressed by adult persons who wear a face protection mask”.

2.4 Research Method

Individual case-studies, in order to identify the ability of learners to recognize emotions in persons wearing FPM in different geographical areas of Greece.

2.5 Type of Sample

Convenient sample, based on the ease of access to schools by the researchers, given the current health protection conditions in schools during the period of the research.

2.6 Sample Size

303 male and female elementary and high school students, of which 51 are in 1st Elementary School grade, 25 in 3rd Elementary School grade, 80 in 5th Elementary School grade, 54 in 1st Secondary School grade, 40 in 2nd Secondary School grade, and 53 in 3rd Secondary School grade.

2.7 Research Tool

“Emotion Recognition Sheet”, a tool built by the researchers. The participants were given a sheet in which they would observe photos of a male and a female expressing a particular emotion wearing FPM. Then, the participants should select from a sideways list the expressed emotion according to their opinion. Both the presented models (male and female) were photographed expressing the same 9 emotions and each photo was arranged in the Sheet randomly. Therefore, in the “Emotion Recognition Sheet” the participants had to complete a total of 18 questions, 9 per each presented model (male and female).

<p>Fig. 1</p>  <p>What is the expressing emotion by the person in Fig.1?</p>	Joy	Sadness	Anger
	Fear	Surprise	Worry
	Shame	Jealousy	Disgust

<p>Fig. 2</p>  <p>What is the expressing emotion by the person in Fig.2?</p>	Disgust	Surprise	Joy
	Jealousy	Shame	Anger
	Sadness	Fear	Worry

Figure 1. Part of the “Emotion Recognition Sheet” Showing the 2 First Questions Given to the Participating Learners

2.8 Data Analysis Tool

SPSS 26 software

2.9 Models of Emotion Representation

A male and a female teacher

2.10 Selection Criterion of the Models

The models expressing emotions were selected on the basis that they are adults and in an age range of teachers or/and parents with whom learners come into contact in activities throughout adults wearing FPM.

2.11 Timetable for Conducting the Survey

December 20-23, 2021

3. Research General Result

Initially, the Emotion Recognition Sheet was administered to the Control Group. The processing of the extracted data revealed 60.86% success in the recognition of emotions by the students. The average of correct answers was 11 out of 18 questions in total. It is worth noting that there was no difference in the answers regarding the gender and class of the participating students. Specifically, in terms of gender, the success rate was exactly the same (61%) for both sexes. In terms of grade, the range of correct answers extends from 10 correct answers (56% success rate for 3rd grade students) to 13 correct answers (72% for 1st grade students). However, the rates are different regarding the number of students' siblings. Students without siblings present a success rate of 66.7% (12/18 correct answers), students with 2 siblings present a success rate of 61%, students with 3 siblings present a success rate of 72.2% while the percentages of students with many siblings are lower (50% for students with 4 siblings and 39% for students with 5 siblings). However, the last two categories constitute only the 5.5% of the sample and, therefore, a small percentage to draw a safe conclusion about the specific categories. Hence, we can say that, apart from the students with 4 and 5 siblings who show low rates of emotion recognition, the students of the control group recognize in a percentage of 60.86% and an average of 11/18 successes the emotions of the depicted figures who do not wear a face protection mask.

Afterwards, the Emotion Recognition Sheet was given to the experimental group to fill out. Regarding the gender of the research subjects, it is found that 51.8% of the participants are males and 47.9% are females. A 51.5% attend Primary School and 49.5% attend Secondary School. Therefore, there is a data isomerization of the relevant variables, so that the conclusions drawn will have reliability and validity.

The majority of the research subjects stated that they have at least one sibling, while 27.4% of the respondents stated that they have two (2) siblings, the majority of whom are of a different gender, while there is also a percentage of 15% who stated that they are only children. From the above data we can deduce that the subjects of the sample have persons of common reference and expression, such as siblings, from whom they can draw experiences, opinions and exchange thoughts and findings (Thompson & O'Neill Grace, 2001, pp. 47-58; Colapinto, 2019, p. 109), thus references compatible with the subject of this study.

The survey data shows that the subjects of the sample recognized the represented emotion at a rate of 39.6%, which means that they failed to correctly recognize 2 out of 3 emotions of the questions (Figure 2).

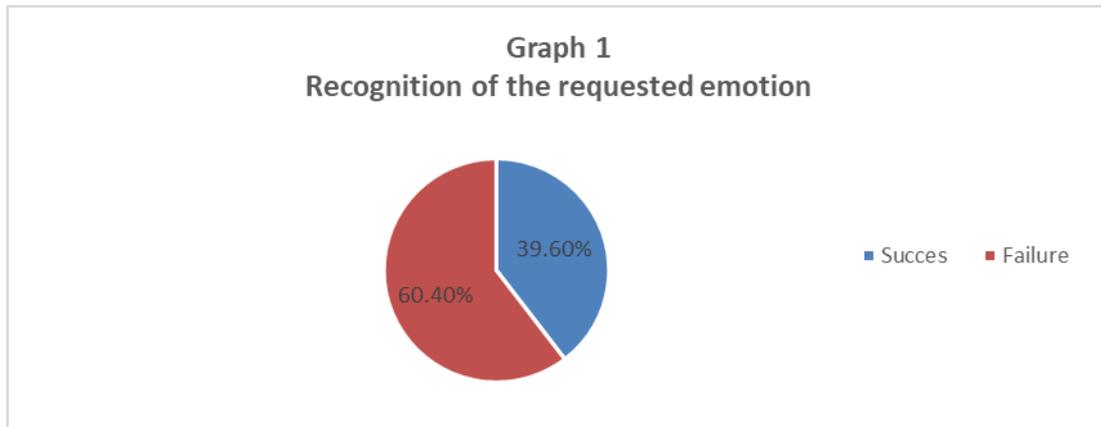


Figure 2. Recognition of the Requested Emotion Rates

From the research data it also appears that there is no statistically significant difference in the recognition of the emotions expressed. In particular, when the presented model is a male the emotion is recognized by the 41.3% of the subjects, while when the presented model is a female the emotion is recognized by a 37.8% (Figure 3). It is noted that the highest (76.9%) and lowest (1.7%) percentage of emotion recognition occurred in the male model (Figure 4). From this data it is deduced that possibly in the male model the expression of the specific emotions -mainly through the movements of the eyebrows- is more intense, taking into account that the emotions of “Anger” and “Anxiety” require lowering or raising the eyebrows in order to better render the facial expression (Christodoulou, 2019, pp. 41-42).

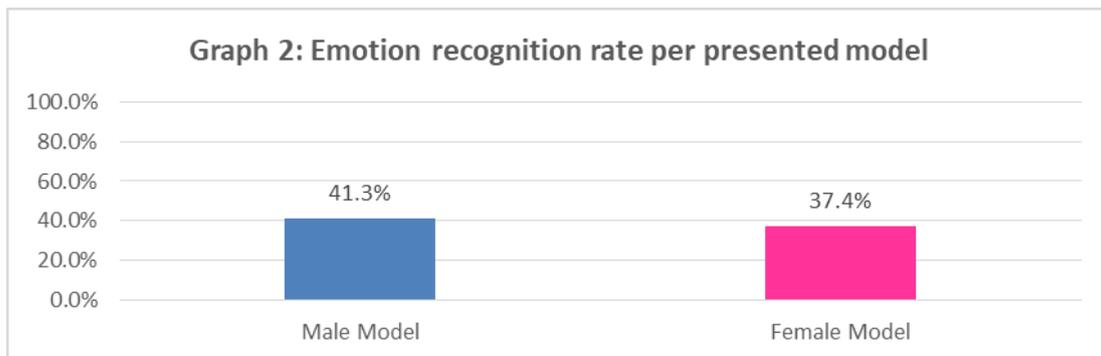


Figure 3. Emotion Recognition Rate Per Presented Model

The data also show that the minimum of correct answers given is 0/18, while the maximum of successes is 14/18. The average of correct answers is 8/18. Therefore, the data highlight a generalized difficulty of the sample subjects in recognizing emotions regardless of gender and age. This is certainly an interesting finding, which needs further investigation, in order to highlight the causes of this situation.

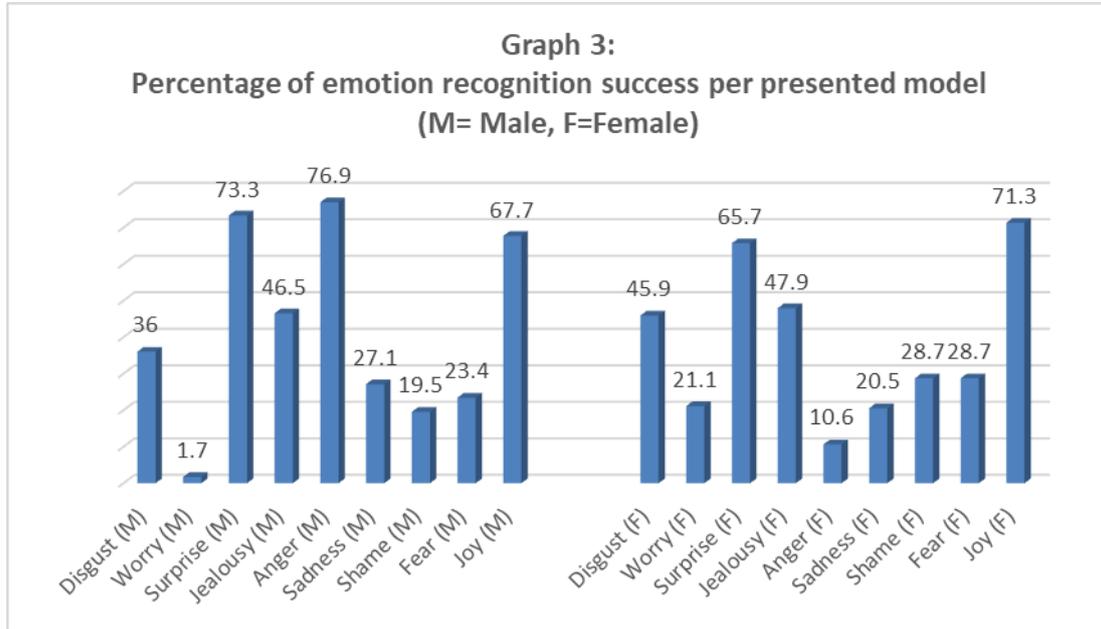


Figure 4. Percentage of Emotion Recognition Success Per Presented Model

Moreover, it follows that there is no significant difference to the level of the emotion recognition regarding the factor of the number of siblings. From this finding it is deduced that the factors, which make difficult for the research subjects to recognize the emotions of adults, who wear a face protection mask, are independent of the existence of other siblings. So, it can be said that their siblings also face similar difficulties in the ability to recognize emotions.

Table 1. Successful Answers in Correlation to Number of Siblings

Number of Siblings	Gender of siblings	Subtotals		Overall totals	
		N	%	N	%
Siblings: 0	-	7	38,9	7	38,9
	1 Female	7	38,9		
Siblings: 1	1 Male	8	44,4	8	42,6
	Not stated	8	44,4		
	2 Females	7	38,9		
Siblings: 2	2 Males	6	33,3	7	37,0
	Female + Male	7	38,9		
	3 Females	5	27,8		
Siblings: 3	1 Male + 2 Females	6	33,3	6	34,7
	2 Males + 1 Female	6	33,3		
	3 Males	8	44,4		

Siblings: 4	2 Male + 2 Females	6	33,3	6	30,6
	3 Males + 1 Female	5	27,8		
Siblings: 5	3 Males + 2 Females	6	33,3	6	33,3
	4 Males + 1 Female	6	33,3		

Table 1, in addition, presents the successful answers of the participating learners by the number of their siblings. Those who stated that they have 1 sibling (42.6%) show a little more success. Those who have 2 or no siblings show M.O. 37% and 38.9% respectively with $N = 7$ correct answers. Finally, guessers with 4 and 5 siblings showed a lowest average recognition (33.3% and 30.6%). No particular differences are observed in terms of family composition: the higher average of successful answers are shown by learners with 1 or 3 siblings, while the lower average of successful answers is presented by participants with three sisters.

4. Further Findings and Discussion

Recognition of emotions expressed by the female model:

Regarding the individual emotions (see Figure 2 and Figure 4), when the presented model is a female, the results that emerge are as follows (without significant statistical differences depending on the gender or age of the research subjects):



Figure 5. Facial Expressions of the Selected Nine Emotions by the Female Model

- The emotion of “Fear” is recognized at a rate of 28.7% and instead the greater majority of the subjects consider that the expressed emotion is “Surprise”. The relatively small percentage of recognition may be due to the capture of a “partial expression” of the emotion, as the use of the FPM hides the twitches of the mouth and part of the cheeks (Christodoulou, 2019, p. 81). To express the emotion of fear, a mouth opening along with an excessive eyes opening and raising of the eyebrows are required (see Givens under the entry: “Fear”: <http://center-for-nonverbal-studies.org/htdocs/fear.htm>, retrieved and last accessed: 21.01.2022). Similarly, the same twitches are required for the event of “Surprise”, as “Surprise” is an emotion related to “Fear” (Christodoulou, 2019, p. 82).
- The emotion of “Jealousy” is recognized in 47.9%, while the subjects who did not correctly recognize this emotion saw “Anxiety” (22.4%) and “Disgust” (12.2%). A similar confusion prevailed in the distinction of “Anger”, which was recognized by only a 10.6% of the subjects. The expression of “Anger” requires a lowering and furrowing of the eyebrows, a wild stare expression (Ekman, 2007, pp. 126-127), where this particular expression is referred to as “glare”. The participants recognized this emotion at a low rate, confusing it mainly with “Jealousy” (47.2%) where a partial eyebrow raise is required (Ekman, 2007, p. 96). Furthermore, subjects tended to confuse “Jealousy” with “Anxiety”, “Disgust” and “Anger”, a fact which can be considered relatively expected as the facial elements that make up the expression of “Jealousy” can be detected to other emotions as well (Bauminger, 2004, p. 157).
- The emotion of “Shame” is correctly recognized by a 28.7%, while the 76.6% of the research subjects who do not recognize the emotion of “Shame” saw instead the emotions 13.9% of “Anxiety” (13.9%), “Sadness” (12.5%) and “Anger” (10.9%). The expression of “Shame” is expressed mainly by pursed lips, lowered gaze and slightly tilted head forward or to the side (Keltner & Buswell, 1996, p. 165). Lowering the gaze to the partial expression of the emotion of “Shame” possibly led the subjects to choose “Sadness” or “Anger” (Ekman, 2003, p. 96).
- The emotion of “Anxiety” is correctly recognized at a rate of 21.1%. The expression of this emotion is characterized by a lowering of the head forward and a partial raising of the eyebrows (Condliffe & Maratos, 2020, p. 1397). Subjects misidentified the partial expression of the emotion “Shame”, “Joy”, and “Fear”, which require raised eyebrows for their expression.
- The emotion of “Surprise” is successfully recognized at a rate of 65.7%. This emotion was recognized by a relatively large percentage of subjects, as its main characteristic is the excessively raised eyebrows and an open mouth (Ekman, 2007, p. 164). Subjects who did not recognize the emotion of “Surprise” distinguished “Joy” and “Fear”, the expression of which required eyebrows excessively raised and eyes wide-open (Toohey, 2014, pp. 49-53).
- The emotion of “Sadness” is successfully recognized at a rate of 20.5%. The subjects in this case incorrectly recognized the emotion of “Joy” (17.2%), “Jealousy” (17.2%) and “Shame” (16.5%). This confusion may be due to the fact that during the partial expression of the emotion of sadness

there is a lifting of the cheeks, a lowering of the gaze and a partial raising of the eyebrows (Ekman, 2003, p. 96). A raising of the eyebrows is also observed for the expression of the emotion of “Joy” (Christodoulou, 2019, p. 85).

- The fact that a 71.3% of the research subjects recognize the feeling of “Joy” is significant. The expression of the emotion of “Joy” requires the formation of a smile. This emotion seems to be recognized by a large percentage of subjects during its partial expression due to the distinct movement of the eyelid muscles, as a consequence of smiling (Christodoulou, 2019, p. 87; Ekman, 2007, pp. 204-205).

- In addition, the research subjects correctly recognize the emotion of “Disgust” in a 45.8% of cases. The expression of “Disgust” is captured by a raised upper lip, wrinkled nose, raised cheeks, lowered eyebrows and eyelids (Ekman, 2007, pp. 183-187) and this appears to be prominently captured in the model’s partial expression of emotion. Subjects who did not recognize the expression of “Disgust” responded that they discerned “Anxiety” or “Shame”, possibly misled by the lowered eyebrows and eyelids.

The above interpretations regarding the recognition of emotions in the female model highlight the important role of the “integrated expression” when expressing emotions. The “partial expression”, which is presented by the person wearing a FPM, allows the recipient of the non-verbal message to decode and interpret the expressions of the eyes, eyebrows, upper part of the cheeks, i.e., only the upper part of the head. In this way, as evidenced by the above findings, the receiver may misinterpret the communicative intent of the sender of the non-verbal message, resulting in failing at the communication's objective. At the same time, the above findings lead to the need to compensate for the apparent communicative and emotional deficit with other body movements (emphatic hand movements, body posture) or with further strengthening of the verbal delivery of the communicative message. Finally, regarding the findings of the depictions of the female model, the hypothesis of the research that the subjects are expected to recognize the emotions represented, does not appear to be confirmed.

Recognition of emotions expressed by the male model:

Consequently, when the presented model is a male (Figure 6), the results that emerge are as follows (without significant statistical differences depending on the gender or age of the research subjects):

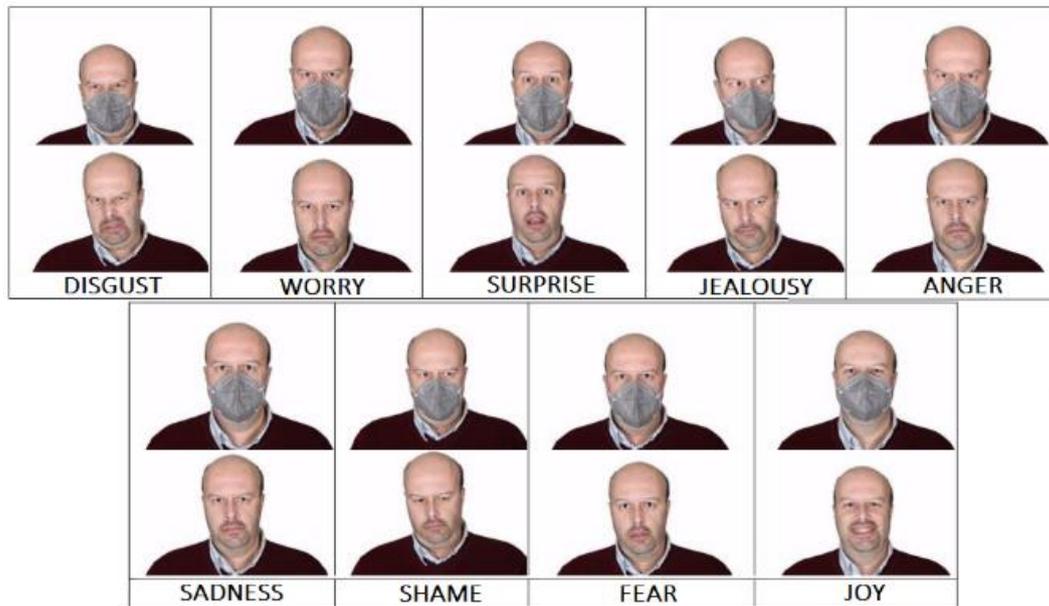


Figure 6. Facial Expressions of the Selected Nine Emotion by the Male Model

- The emotion of “Joy” is recognized by a 67.7% of the research subjects, a percentage corresponding to that of the female model. This percentage is due, as mentioned above, to the distinct movement of the eyelid muscles caused by the smile (Christodoulou, 2019, p. 87; Ekman, 2007, pp. 204-205).
- The feeling of “Worry” was recognized at a rate of 1.7%. This low percentage may be due to the fact that the representation of the emotion by the male model with a partial raising of the eyebrows and a lowering of the head (Condliffe & Maratos, 2020, p. 1397) is at the same time a characteristic of “Anger” expression (Bhushan, 2015, p. 271). This interpretation results from the fact that the subjects of the research distinguished “Anger” at a rate of 88.8% in this specific question.
- The emotion of “Disgust” was successfully recognized at a rate of 36%. However, although as to the female model the subjects who did not distinguish “Disgust”, stated that they did distinguish “Anxiety” or “Shame”, in the male model the incorrect responses focused on “Anger” (24.1%) and “Jealousy” (23.8%). The differentiation during the partial expression of the emotion may be due to the movements of the eyebrows; the intense contraction (which is not observed in the female model), is a characteristic of “Anger”, while their partial elevation refers to the emotion of “Jealousy” (Ekman, 2007, p. 96, pp. 126-127).
- The emotion of “Fear” was recognized at a rate of 23.4% and instead of that, “Shame” was incorrectly recognized at a rate of 28.4%. Additionally, the participants stated that they distinguish “Anxiety” (19.1%) and “Surprise” (14.9%). This misinterpretation may be due to capturing the emotion with head tilted forward, -also a characteristic of “Shame” and “Anxiety”- and with raised

eyebrows, a characteristic of “Surprise” (Condliffe & Maratos, 2020, p. 1397; Christodoulou, 2019, p. 82; Keltner & Buswell, 1996, p. 165).

- It is important to state that as to the male model, the emotion of “Anger” is correctly recognized by the vast majority (76.9%) of the research subjects, possibly due to the intense gaze and the contraction of the eyebrows.
- The emotion of “Sadness” on the face of the male wearing a FPM is recognized by a 27.1% of the research subjects and instead of this emotion the research subjects incorrectly recognized the emotion of “Fear” in a percentage of 22, 4%, “Anxiety” at a rate of 16.2% and “Shame” at a rate of 15.2%. Each of the individual expression features of “Sadness”, namely the raising of the cheeks, the lowering of the gaze and the partial raising of the eyebrows (Ekman, 2003, p. 96) are also features of the other emotions.
- The emotion of “Shame” is recognized at a rate of 19.5% and instead the research subjects misidentify the emotion of “Jealousy” (30%), the emotion of “Anxiety” (16.2%) and the emotion of “Anger” at a rate of 12.5%. During the partial expression of the emotion, the lowered gaze and the slightly forward head are partial features of the other emotions as well (Ekman, 2007, p. 96, pp. 126-127). For the same reason, the emotion of “Jealousy” is recognized by a 46.5% of the research subjects, while from the 53.5% of the research subjects, who do not recognize the correct emotion of “Jealousy”, they incorrectly recognize at a rate of 19.1% the feeling of “Anxiety” and the feeling of “Shame” (10.2%).
- Finally, the emotion of “Surprise” is recognized by the vast majority (73.3%) of the research subjects as to the male model, perhaps due to the presented strong raising of the eyebrows.

From the interpretations of the individual emotions in relation to the male model, it is first established that there is no difference in the ability to recognize emotions depending on the presented model’s sex. Furthermore, the effect of “partial expression” of emotions by covering the mouth, the jaw and the lower part of the cheeks seems to have the same effect in the male model, prompting the subjects to give incorrect answers. However, in cases where eyebrow movements and eye opening were strongly depicted (such as at the cases of “Anger”, “Surprise”, “Joy”) the subjects’ responses as to the male model reached high percentages. This finding adds to the practices of compensating for the absence of the “complete expression” of emotion (hand movements, body posture, strengthening of verbal communication) the need for more emphatic expression of emotions by using the eyes, eyebrows or tilting the head. It is pointed out, finally, that regarding the male model, the hypothesis of the research that the subjects are expected to recognize the emotions represented cannot be confirmed.

5. Conclusions

The demographic data extracted of the survey confirm the predominance of the nuclear family type, as a 64.3% of the respondents who participated in this survey stated that they have no siblings or that they have a brother or sister.

The research subjects failed to recognize the projected emotions on the adults' faces at a rate of 60.40%. This finding contrasts with the success rate of the control group (61%) and shows that for the present research it confirms its initial hypotheses.

It appears that there are no differences in terms of the age of the learners and the successful answers, as the distribution of successes follows the distribution of the sample population.

An important finding is that the average number of successful responses seems to decrease as the number of family members, increases. Children with one sibling achieved an average of 8 successful responses, children with no or 2 siblings achieved an average of 7 successes, while the lowest average occurred in children with 3, 4 and 5 siblings. However, the difference in the specific averages is small enough to draw safe and generalizable conclusions.

Regarding the questions where the learners failed to identify the represented emotion, occurs a plurality of responses. Furthermore, from the processing of the "Emotion Identification Sheets" it emerged that the participants in several cases attributed the same emotion to a different expression.

It also follows that depending on the reference models, the most recognizable emotion as to the female model is "Joy" while "Anger" is the less recognizable. In the male model's face, the feeling of "Anger" has been recognized more and the feeling of "Worry" less.

The low success rates in recognizing some emotions appear to be due to their "partial expression" by the male and female models. Capturing emotions only with eyes and/or head movements led the subjects to confusion of common features and to incorrect responses. This fact highlights the importance of the cooperation of all facial muscles in the clear expression of an emotion. At the same time, this unavoidable "partial expression" of emotions makes non-verbal communication incomplete and highlights the need to make up for the expressive deficit in other ways, such as hand movements and body posture, as well as strengthening verbal communication.

Based on the above research findings, with regard to the recognition of the expressed emotion by children-learners of the reference age groups of the present research-both for the female and the male model as well-the need for a relative teaching intervention in order to recognize the emotions of individuals who wear FPM. The teaching intervention is necessary, in order to avoid the risk of an emotional deficit, but also of the level of interpersonal communication between children-parents. On this basis, there is a need for designing interventions that will strengthen the teachers' abilities of non-verbal communications features, as well the learners' abilities to identify these expressions. These interventions should aim at (a) the teachers' use of more intense expression of emotions (with verbal expression and body movements) and (b) practicing the students, during the teaching process, in recognizing the emotions of persons wearing a FPM. Of course, we hope that the pandemic will reach

is end at wearing a FPM in the classroom will not be the case anymore.

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