RESEARCH-ACTION AND COVID-19: A CASE STUDY

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1. Premise

1.1 Children and the lockdown

Only a few studies have been undertaken so far to determine the psychological consequences of the 2020 lockdown[1] on children. Sprang and Silman studied in 2013 the psychological effects resulting from pandemics, highlighting that periods of isolation such as quarantine can traumatize children, as well as their families. Taking account of current experience, it appears to be the case that children and adolescents are more vulnerable to the effects of the Covid-19 pandemic than adults, and tend to react psychologically in a negative way (Zhou, 2020), leading to manifestations of anxiety, depression and stress (Xiang *et al*., 2020)[2] or uncertainty, fear, distraction and irritability (Jiao *et al*., 2020).

In Italy, Conti *et al*. (2020) assessed emotional and behavioral changes in minors with neurological and / or psychiatric disorders during lockdown, verifying an increase in anxiety disorders and somatic problems in children (up to 5 years), with an increase in obsessive problems -compulsive between 6 and 18 years, which are also correlated with the onset of economic problems in the family. A research study by IRCCS Gaslini (2020)[3], highlighted the onset of sleep disorders, anxiety attacks and increased irritability in Italian children and adolescents during the same period. Mantovani *et al*. (2020)[4] explored the emotional and behavioral reactions of young children through the testimonies of parents and, considering the age group between 6 and 10 years, there was an improvement in relationships with parents (37.6%) and

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[1] With the Prime Ministerial Decree of March 9, 2020, the start of a national lockdown period was decided, due to Covid-19, which had lasted until May 18, 2020.

[2] There is abundant literature relating the psychological and social effects of traumatic disasters (Covid-19 on the adult population. See: Osofsky J.D. et al. (2020); Pfefferbaum and North (2020).

[3] The research was conducted between March 24 and April 3, 2020 and revealed that, just a few days after the beginning of the lockdown period, the isolation had led to reactions both on physical health and also on the emotional state of family members, of all ages.

[4] The research was conducted in July and August 2020 in the provinces of Lombardy most affected by Covid-19, involved 3,440 families and concerned about 6,000 children between the ages of 1 and 10.

with siblings (31.1%), but at the same time they suffered from not being able to go to school (62.3%) and, above all, not being able to play with other children (78.4%). With regard to behavioral reactions, sleep alterations emerged in 47.9% of cases, a widespread decrease in attention (73.8%) and a worsening in concentration (83.0%). One third of parents have noted the presence of fears in their children (the most common are: the fear of going out and interacting with other people), which corresponds to 17.9% of children between 6 and 10 years.

Wang *et al*. (2020), reports that the absence of school activity causes a harmful psychological impact in children and adolescents leading to impaired concentration on school activities. Phelps and Sperry (2020), in their study correlate this with the strong emotional and also economic impact that the pandemic has had on families. The children's response therefore depends on the reactions of their parents, and it appears that children who have suffered loss of loved ones during a pandemic may even experience serious mental crises (Earls *et al*. 2008).

As Maria Rita Parsi (2020) reflects, even forced separation from grandparents or their demise can have negative repercussions on children. Furthermore, the family itself can be a source of destabilization for those children who have been forced to stay at home for the entire time of the lockdown in "dysfunctional" families where economic difficulties and psychological breakdowns have been added to the pre-existing problems of coexistence and relationships. For those children who live in "containing" families the situation is different. Those children who have lived in a climate of harmony have been able to overcome the psychological repercussions of the pandemic. In both cases the behavior of the parents has an influence on their children and the sudden changes that families had to face may have provoked maladaptive psychological reactions (Fontanesi *et al*. 2020).

What Parsi fears is that Covid-19 has given rise to "Psicovid-19", that is a long trail of consequences on an emotional level in all age groups, including children, "triggering fears in them, as in all for the near and future future, anguish of death, panic, psychic and physical malaise "(Parsi, 2020, p. 121).

But the lockdown period has also had positive results, due to the fact that in many cases parents and children have been able to spend a lot of time together, without the daily commitments that mark the day and have been able to devote themselves more to activities that they are usually are not able to share, improving the relationship between parents and children (Wang *et al*., 2020).

1.2. Action research

The German psychologist Kurt Lewin[5] coined in the 1940s (Lewin, 1946, 1947) the concept of action research. A peculiarity of action research consists in combining theoretical knowledge and action in a circular process, for change in a group or for social change, in which researchers are themselves actors of change, and represents "the place and the moment through which [the process] produces knowledge" (Trombetta and Rosiello, 2000, p. 250). Subsequently, the action research method began to be used also in the educational field. Within this field it configures itself as reflective research with the aim of intervening on contingent problematic situations, circumscribed in a space-time problematic context, and not with the aim of creating laws or theories which reflect on the practice of the change to be made. Therefore, the teacher is the main protagonist of the research-action path started in the classroom. The teacher can cover both roles of researcher in a context[6] and also agent of change. Detecting a problem in a concrete reality s/he proceeds with an analysis of "that" context (which is never static and amidst unforeseen events, after Perticari, 1996) and gives rise to useful indications for starting a change that takes into account the uniqueness of that specific reality and the dynamics that are remembered in it. The exploration change starts, and it is a flexible and "recursive process of planning, observation, reflection, redesign" (Varisco, 2002, p. 243). The research can lead to modifications according to the changes that occur in reality and thereby provide an added value useful for achieving the final goal.

In action research, comparison is important throughout the process. To prevent the teacher from falling into self-referentiality it is preferable to work in a group that allows exchanges and reflections to share. However, it is also possible to remain within an individual dimension, and in this case the teacher can systematically resort

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[5] Kurt Lewin was an exponent of Gestalt theory and in 1922 he theorized the concept of "psychological field", from which the study of social dynamisms began, which subsequently led him to define the concept of "social field" and to deal with individual dynamics and of interdependence between people and the environment. Lewin was convinced that social psychology should not remain relegated to the world of theory, but should immerse itself in reality, and psychological research should represent not only an opportunity for study, but for intervention on the social. This approach subsequently led him to illustrate the paradigms of Action Research in his works of 1946 and 1947 and in 1947 he founded the journal Human Relations which deals with the study of social problems (Trombetta and Rosiello, 2000). Emblematic of Lewin's thought is the statement that "Research that produces only books is not enough" (Lewin, 1946, p. 35).

[6] In action research in the school environment, the expert researcher, while remaining a point of reference, makes his knowledge and skills available to the teacher in order to make him autonomous in the entire research process and subsequent intervention on the situation-problem (Mantovani, 1998). It is in this that action-research is distinguished from pure research, where the researcher is in a position of detachment from the situation, observes it, analyzes it, interprets it, but does not intervene on it.

to feedback from pupils who become co-protagonists of the research (Losito and Pozzo, 2005).

The action research project presented here takes place within the primary school where the teacher became a researcher in order to be able to address a latent problem that probably would not have emerged without a targeted exploration: pandemic-related experiences of children.

2. Objectives, tool and method

The aim of this research was to make primary school teachers acquire useful information to understand what the emotional and experiential experience of children of third, fourth and fifth grades was during the lockdown of spring 2020 and what are the current emotional states towards the Coronavirus epidemic. To this end, a questionnaire divided into 20 questions was prepared, previously tested on a group of 67 children. A funnel technique was used to help children in memory recollection to help them to focus on the lockdown period; first asking them about the memories they had of how they spent their time during that period, and through this process to bring out the emotional aspects. After the initial factual questions (gender and class attended), questions were inserted to verify: a) the knowledge that children have about Covid-19; b) how they spent their time during the lockdown; c) emotions and feelings during the quarantine; d) current emotions and feelings; e) what they have learnt during that time. Only two open questions were introduced in the questionnaire: the initial question "Briefly explain what Covid is" and the final question "Do you want to add something?".

The administration of the questionnaire took place in the classroom. Questionnaires were distributed to the children, the teacher read the questions one at a time and the children answered independently. The data was collected anonymously and processed in aggregate form in full compliance with privacy according to the GDPR (2016/679) and Legislative Decree 101/2018[7]. The research took place in the period between January and May 2021, involving 29 primary school classes in the north-eastern provinces (Belluno, Gorizia, Pordenone, Treviso, Udine, Venice). The sample consisted of 533 pupils, of which 19.2% third grade pupils, 51.0% fourth grade and 29.8% fifth grade, with an overall presence of 51.1% males and 48.9% of females.

Given the methods of selecting the sample and the purposes of the action research, there is no probabilistic sample, therefore the results of the research cannot be subject

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[7] The trainee students of the primary education science course of the University of Udine administered the questionnaires in the presence of the class teachers. The managers of the schools involved in the research project approved it before administering. The families signed after reading the information form and they gave consent for the administration of the questionnaire to their children.

to inference, but have provided useful information to the teachers who have undertaken targeted interventions in response to the emotional difficulties manifested in their pupils.

3. Data analysis and hypothesis testing

3.1. Knowledge about Covid-19

The children have understood that Covid is a virus and they explain in simple words some concepts that, given their age, are probably still being developed, but very effective: "it is a very dangerous virus that prevents us from being together and we must put on the mask "; "It is a virus that divides us like a transparent wall. It is a test of life for all of us which we must face by being strong and united"; "Covid is a very strong virus that fights all people, if you catch it you can even die. Because of Covid we had to stay home from school "; "It's a big blue ball with big lines on the hips".

Since the focus of the research project's interest was to bring out the emotional experience of children, with the intention of starting projects to support their fears, it was decided to present only those results that are directly related to this objective.

3.2. Emotional experience aroused by Covid-19

Fear is an emotion that is very present in the memory of children. In fact, the fear that during the lockdown some family member or friend would get sick with Covid, was experienced by 81.4% of children, regardless of age, but with a gender difference (males 77.1% and females 85.8 %)[8].

But the pandemic has not yet passed and the children not only remember well what they lived during that period of forced stay at home but also report what their current fears are. What is most frightening of all is the fear that loved ones can get sick (Me 5), and that they themselves can get Covid (Me 5). The fear of getting sick (Covid aside) (Me 4) is stronger as children age (χ^2 test = 35.571, critical value = 18.307) and is different for males and females (Me 3 and Me 4) (χ^2test = 20.775, critical value = 11.070). The fear of frequenting crowded places also increases with age (Me 1 in the third and Me 3 in the fourth and fifth) (χ^2 test = 32.633, critical value = 18.307), while

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[8] To verify the statistical significance of the differences between age (i.e. between classes) and gender, the χ^2 test was applied, with α = 0.05. Below, we will report only the values of the tests that were significant and the respective critical values (for the χ^2 tests, see Ian Diamond and Julie Jefferies, 2006). The χ^2 test, by gender, is equal to 6.567, critical value = 3.841.

there is no gender difference. Everything else does not seem to cause concern in children (tab. 1).

Table 1 – *What is frightening children now (median value).*

	Median
That the people they care about get Covid	5
Get Covid themselves	5
Getting sick (cough, cold, fever)	4
Attending crowded places	3
Indoor playing	1
Taking public transport	1
Playing outdoors alone	0
Playing outdoors with others	0
Be close to friends	0
Playing sports	0
Going out	0

To explore the presence of anxiety situations experienced by children it was decided to resort to an indicator that, as seen in the mentioned research, it can be an indication of stressful conditions- namely sleep- by asking them if during the lockdown they had or not had sleep-related problems [9] (tab. 2), and it emerged that the majority went to sleep late, with a statistically significant increase with increasing age (from 56.4% in third to 69.2% in fifth) (χ^2 test = 7.190, critical value = 5.991). Even the choice of going to sleep with mum and dad differs between the ages, with a higher propensity for fourth grade children (χ^2 test = 19.837, critical value = 5.991). Regarding gender, there was a difference in having bad dreams (males 18.2%, females 26.5%, χ^2 test = 5.388, critical value = 3.481), in not being able to fall asleep (males 25.2 %, females 39.6%, χ^2 test = 12.620, critical value = 3.481) and having many thoughts on the effects of Covid or on school (males 26.3%, females 36.9%, χ^2 test = 6.931 , critical value = 3.481).

Table 2 - *Behavior of children at night by class (percentage values).*

	%
I went to sleep late	60,4
I slept peacefully	59,1
I couldn't fall asleep	32,3
I had so many thoughts	31,5
I woke up often	28,7
I had bad dreams	22,3
I used to go to sleep with mom and dad	12,1

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[9] The repercussions on sleep of the current pandemic period were studied on adults (Kutana and Lau 2020; Huang and Zhao 2020).

Boredom and loneliness are emotions that emerged unexpectedly which are not to be underestimated. Boredom, to varying degrees, characterized the days of children during the lockdown without distinction of gender; only 25.2% said that they had never been bored (fig. 1). On the other hand a distinction is made by age: younger children get bored less "every day", with a crescendo with increasing age (11.7% in third, 22.3% in fourth and 24.5% in fifth).

Figure 1 - *The children got bored (percentage values).*
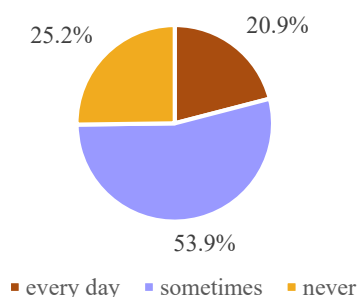
Out of the total number of children interviewed, 49.9% said that in that period they sometimes felt alone, without distinction of gender but of age. In fact, it ranges from 37.6% of third grade children to 48.5% of fourth grade children to 60.1% of fifth grade children (Test of χ^2 = 12.904, critical value = 5.991). Of the total number of children who felt alone, 25.4% got bored every day, 54.9% every now and then and only 19.7% never. It is sobering that 77.7% of children who said they felt lonely have siblings and 83.0% of them said their parents stayed home longer than usual during the lockdown. Overall, 12.7% of all children felt lonely and bored every day and 27.4% felt lonely and bored at times.

Still in the sphere of emotions, children reflected about the things that they missed during the lockdown, using an ordinal scale with four positions (from "not at all" = 1 to "a lot" = 4) (tab. 3). It is clear that children have suffered a lot from being far from friends and relatives, so much so that it is also pointed out in the "other" option placed at the bottom of the question, from which 25.3% of friends and 14.5% of grandparents stand out. which is joined by 22.3% of teachers and, also, 4.5% of fathers and 3.0% of mothers.

Table 3 - *How far away certain habits or people are (median value).*

	Median
Meeting with the grandparents	4
Meeting with friends	4
Meeting with cousins	4
Meeting with the uncles	4
Celebrating their own birthday	4
Going out without the mask	4
Going to school	3
Running outdoors	3
Going for grocery shopping	2
Going to the garden / park	1

Faced with a situation that emotionally put them to the test, we can say that Covid has also had educational and training effects on children who have recognized that they have learnt to respect the rules (67.5%), help at home (63.5%), appreciate school (47.5%), but they have also learnt to be more independent (56.5%), and to be alone (39.2%) - even if 60% of the latter suffered from this loneliness. On the relational front, 53.1% said they had improved relations with family members, 39.0% learnt not to make their mothers angry and 32.2% improved relations with their neighbours.

To conclude we can quote a child who wrote: "I learned to appreciate life as it is and I also learned to help people, even not good people".

4.   Conclusions: from Research to Action

The focus of the research was on emotions. The data collected reveal the profiles of children who are aware of the seriousness of the situation they are going through. Children have become more responsible and have understood the importance of rules, and have learned to appreciate things whose lack has made them recover their value. The data also revealed a strong sharing of the fear of Covid and, unexpectedly, the non-negligible presence of children who were bored and / or felt alone, despite the presence of siblings or family members.

Since the focus of Action Research is the psycho-social well-being of children, it is the teacher's duty to address not only the problems that emerge from the majority of children, but also those that may affect a small number of them or even just one. Therefore, the transition from Research to Action requires the involvement of the whole class and a participatory role of the teacher. The actions that the professor will implement will first of all be listening and sharing; the purpose of these actions is to overcome the negative emotional condition, which will be followed, at the end of the course, by a moment of evaluation of the effectiveness of the project.

Listening is the first rule that the teacher must use to explore the emotional experience of each child and it helps him realize what has happened and also it guides and supports him in his process towards resilience. The second strategy is sharing. It is important that the teacher makes children understand that adults also feel their own fears and concerns, and therefore it will be the teacher who will speak first about their own experiences; this will enable all children to do the same. It is reassuring to understand that we only feel certain emotions and it is important to be able to share not only the moods but also the strategies that everyone has used to overcome difficult moments.

To do all this, the teacher can use different tools and ways of working. For example, direct techniques such as circle time or spontaneous discussion or projective techniques such as drawing, inventing stories, completing cartoons or story endings, role playing simulations or theater workshops.

For example, in regards to the theme of fear, it could be addressed by inserting it into a broader discourse on emotions - that is, recognition and control of emotions. The teachers must talk first about their own experience during the lockdown and then let the children talk; this "normalizes" the fear by making it clear that everyone has gone through certain emotions and feelings. It is important not to minimize the pandemic problem nor to deny it but to recognize it and make it clear that when faced with a problem, a solution must be sought. Whatever the operational strategy chosen by the teacher (circle time, the box of emotions, drawing, dramatization, reality assignments, watching educational videos), it is important that children learn to recognize their emotions and difficulties in dealing with them. Sharing experiences can be a first step in learning emotional regulation (Gross, 1995).

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SUMMARY

Action research and Covid-19

School can play an important role in helping children to manage the general situation attributable to the Covid-19 epidemic. To bring out the emotional problems related to this period, the most suitable strategy seemed to be the start of an action research project. To proceed, a questionnaire divided into 20 questions was administered with reference to the experience of the spring 2020 lockdown and their current emotions.

The research was carried out between January and May 2021, in some provinces of northeastern Italy, and 533 children of the third, fourth and fifth grades of primary school were interviewed who all know what Covid-19 is.

In this work we have chosen to present the emotional reactions of children and the first feeling that emerges is the fear that a family member would get sick (81.4%), and still persists as the main fear (median 5 out of 5) and equally present is the fear of catching Covid themselves (median 5 out of 5) The presence of an anxious experience during quarantine is represented by 60.4% of children who went to sleep late, 32.3% who found it difficult to fall asleep or who he had many thoughts on the effects of Covid (31.5%) or woke up often (28.7%) or had bad dreams (22.3%). Only 14.2% said they always slept peacefully.

Two unpredictable results will have to lead to further exploration. First, 49.9% of children said they felt lonely during the lockdown, despite 77.7% of them having siblings and 83.0% of their parents stayed at home longer than usual in that period. The second figure concerns three quarters of the children who say they were bored during that period: 20.9% every day and 53.9% sometimes. Overall, 12.7% of all children felt lonely and bored every day and 27.4% felt lonely and bored at times.

But there are also positive aspects: 72.6% of children say they changed during the period of the lockdown. They matured personally: they learned to respect the rules (67.5%), to be more independent (56.5%), to appreciate school (47.5%) and to be alone (39.2%) and their family and social relations improved: 53.1% improved relations with their families, 39.0% learned not to make their mothers angry and 32.2% improved relations with neighbors.

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