INTRODUCTION

The new coronavirus (2019-nCoV) appeared in late 2019 in Wuhan, Hubei Province, China. Since then, thousands of cases have been reported in China, in many other countries and in the European Union, including Greece. Data on the epidemiological and clinical features of the 2019-nCoV virus infection are growing rapidly while the number of cases and deaths is increasing every day worldwide.

The first case in Greece appeared on February 26, 2020. On March 11, 2020, due to virus infection outbreak, Greek government decided firstly the closure of all educational structures and then on 13th March, the suspension of the operation of cafes, museums, shopping malls, sports facilities, restaurants, esthetics centers, etc. According to Greek National Health Organization, all the cases that have been confirmed as COVID-19 until 20th April 2020 were 2245 (56% are men) and 116 dead. The median age of death was 74 years and 90.5% had an underlying disease and/or age, above 70 years.
The present study aimed at the social and economic impact caused by this pandemic in esthetic centers. A virus pandemic has a significant impact on social enterprises and poses a challenge to human health and global development. The economic impact of epidemics can be divided into direct (mainly related to resources invested in the treatment of epidemics, vaccines, and drugs) and indirect effects (it can affect the job offer, the health of infected people, change the behavior of various individuals, and businesses). Our results are intended to assess the indirect social and economic impact of the pandemic on the Greek esthetics centers.

2 | MATERIALS AND METHODS

PARTICIPANTS

One hundred and fifty-eight owners of esthetic centers from various areas of Greece participated in this study. The personnel of these commercial institutions embraced secretaries, beauticians, cosmetologists, and in some cases, dermatologists. The esthetic centers’ services included permanent and medical make-up, skin rejuvenation, eyelash extensions, body contouring and fat reduction, laser hair removal, thermolysis, electrolysis, plasma lift and fibroblast, open and closed comedones extraction, and chemical peels. These institutions closed in execution of the government’s decision to avoid the contact between staff and clients and the COVID-19 potential spread.

They were all informed about the details of the study including potential benefits and provided informed consent.

2.1 | Statistical and data analysis

Statistical analyses were conducted using Google Forms. This platform was selected for direct and anonymous communication of research (cost reduction of research), ease of completion and processing of results (error avoidance, statistical measurements), and paper consumption avoidance (environmental protection). The questionnaires were 13 and developed through PSPP software.

3 | RESULTS

The participants were businessmen and almost all of them owned one esthetic center (95.6%, ie, 148 participants) while the rest owned 2-5 centers. Fifty-eight people (38%) answered that they do not have staff and 93 (58.2%) employ 1-5 people in their staff. Only 5 esthetic centers have more than 6 staff members. Thus, by a random choice, the answers concern small and medium enterprises of esthetic centers. Only 28.5% mentioned they were concerned about the effects of COVID-19 in December 2019. Two months later, their businesses seemed to be affected financially when the pandemic began to spread. Forty-three participants (27.2%) answered that the business turnover decreased >50%. Only 5.7% of the participants were not affected financially, while the remaining 67.1% (92 entrepreneurs) had a turnover reduction of 1%-50%. These results concerned their businesses before the mandatory work suspension (Figure 1).

The reduction of the monthly turnover is calculated for the first month of suspension of the company in <2000€ for 36.1% (58 companies), in <5000€ for 19.6% (31 companies), in <10 000€ for 5.1% (8 companies), and 1.9% <20 000€ (3 companies). The remaining 36.7% of participants did not answer probably because they did not want to disclose their finances.

There was one question concerning their colleague/partner attitude after COVID-19 appearance. The positive action was that the most of them tried to reassure customers-patients at a rate of 63.3%. However, a percentage of 22.2% had an unaffected behavior.

The 58.2% (95 of people asked) reported that COVID-19 closure measures had a considerably big effect on their psychological condition while 17.7% (27 participants) were overly affected. There was also a considerably percentage of 22.2% (35 participants) that was the least affected (Figure 2).

Most of the participants (62%) find the government measures over the COVID-19 satisfying and the 19%, exceptional. Only a few criticized
them as incomplete. However, they all worried about the future consequences of these restrictive measures in country’s economy (Figure 3).

Many participants (145 from 158) considered, a significant reduction in turnover due to economic difficulties in society was possible. One hundred and thirty-eight participants were concerned about a significant drop in turnover due to public insecurity and 128 were adjusted to meet accumulated financial obligations. Seventy-eight participants agreed changes in theirs every day work was probable.

Sixty-two businessmen responded positively that significant advertising costs could be spent on a customer-patient approach. Only 43 answered affirmatively about the financial deficit due to the re-coordination of the partners and the probable reduction of the customer base (Figure 4).

Despite the economic and psychological effects on their individual and business environment, 86.5% of esthetic centers (134 entrepreneurs) understood the necessity for suspension of esthetics’ services in contrast with the 13.5% who found the measures exorbitant.

**FIGURE 2** Percentages of influence psychological factor of skin care professionals

**FIGURE 3** Percentage that they were satisfied by the decisions taken by the government when the COVID-19 appeared in Greece

4 | DISCUSSION

Infection with the new coronavirus can be asymptomatic or present with flu-like symptoms such as fever, cough, difficulty breathing, fatigue, and myalgia. Respiratory droplets are the main route of transmission, while other possible modes of transmission may be contact with contaminated objects and surfaces. The incubation period is 1-14 days and may present with severe clinical manifestations, such as pneumonia with acute respiratory distress syndrome, septic shock, multiorgan failure, and death. Yet there are no drugs approved or vaccines available for the treatment or prevention of COVID-19 infection, respectively.

The challenge of effective epidemiological control is to strike a balance between reducing virus transmission and cost. The adequacy and authenticity of disclosure information are critical to minimizing financial losses, as either public panic due to overestimation or lack of public awareness due to underestimation can have additional negative economic implications.
A total of 72.3% (112 businessmen) of the first week of COVID-19 in Greece were affected by this situation. Four weeks after the suspension of operations, there was a decrease in monthly income, and significant psychological burden about what “tomorrow will bring” with returning to “normalcy.”

On the positive side, almost all participants stated that they immediately took additional protection measures for their patients-clients and that they considered it necessary to stop the activity of businesses and premises, indicating conscientiousness and responsibility.

Literature is lacking data concerning consequences of sudden and prolonged closure of businesses including esthetic centers from a viral pandemic.

CONFLICT OF INTEREST
None declared.

AUTHOR CONTRIBUTIONS
Foteini Biskanaki involved in data analysis, design, methodology, and writing. Efstathios Rallis performed conceptualization, methodology, and writing assistance. Eleni Andreou involved in data collection and literature search. Eleni Sfiri provided technical help and involved in software. Niki Tertipi: interpretation the data and formally analyzed it. Vassiliki Kefala served as a department chairperson involved in design and supervision.

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