

ACE MODEL

**An Inclusive
Paradigm
To Mitigate
Health Inequalities**

Antonio Errigo

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Fondazione per la Medicina Solidale

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HEALTH INEQUALITIES

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Summary

To begin with, the author explores the concept and determinants of health inequalities, proposing a comprehensive framework to better understand the issue. Then, he offers a comprehensive picture of the Italian and Calabrian context, highlighting their exposure to the phenomenon, and arguing about the role of place on individual's health. Furthermore, the author introduces the ACE MODEL as a remedy to health inequalities, describing its distinctive social-oriented features, and its high-accessibility compared to the private and public health care systems. Finally, drawing conclusions from the findings of the survey carried out for this study, the author suggests that the ACE MODEL exemplifies an outstanding and inclusive paradigm of health care system able to mitigate health inequalities at local level.

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1. WHAT ARE HEALTH INEQUALITIES?

1.1. Concept and Socioeconomic Determinants

Health inequalities refer to the “differences, variations and disparities in the health achievements of individuals and groups” (Kawachi et al., 2002: 647).

In 2017, the World Health Organization (WHO, 2017) highlights that a worrying phenomenon of health inequalities is growing in high-income countries affecting people with lower socioeconomic positions within society. Although early descriptions of the issue occurred in the 19th century thanks to the scientific progresses in epidemiologic studies (Mackenback, 2015), it was only from the 1990s to date that scientists began developing a better understanding of the social and economic determinants of health inequalities (Irwin & Scali, 2010).

Health inequalities are related to income and social disparities. Wilkinson and Marmot (2003: 10) affirm that “Life expectancy is shorter and most diseases are common further down the social ladder in each society.” Marmot (2006) describes the existence of a social gradient in health that affects individuals’ life expectancy. Mackenback (2005: 4) sustains that health inequalities exist between and within all European countries, pointing out that such disparities were found between “people with

higher and low educational, occupational class and income level..." Likewise Costa et al. (2014) outline the existence of a social gradient of health in Europe. They also affirm that East Europe is more affected by health inequalities than North and West Europe. As evidence of the magnitude of the issue across Europe, the Organisation for Economic Co-operation and Development (OECD, 2016) highlights that a substantial share of the low-income European population reports unmet needs for dental and medical examination for financial reasons. The United States is also characterized by large health inequalities related to individual's income level (Hero et al., 2017).

The WHO (2017) suggests that factors such as education, employment status, income level, gender, and ethnicity affect individuals' health status. In addition, the National Academies of Sciences, Engineering and Medicine (2017: 100) affirms that the social determinants of health are "the conditions in the environments in which people live, learn, work, play, worship, and age..." Furthermore, Costa et al. (2014) affirm that the magnitude of health inequalities through time is affected by the specific *cultural features* of the community. In this regard, Costa (2014, author's translation, p.14) affirms:

"...inequalities in subjective health indicators are evident in favour of the most favoured social categories in all European countries, but their intensity and variation over time are also influenced by cultural factors, and they are therefore less useful in guiding contrary actions."

Therefore, in the general equation of health disparities fundamental importance must be attributed to the *cultural* background of the communities, namely, a specific place-based dimension to consider for designing effective strategies to mitigate health inequalities at local level.

1.2. The Built Environment as a Spatial Determinant of Health Inequalities

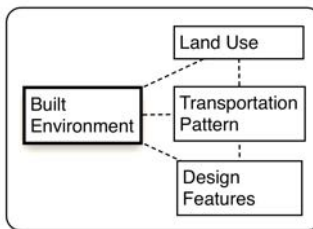
Early concerns about the connection existing between the public health and the built environment¹ occurred during the industrial revolution when unhygienic and overcrowded conditions were conducive to the spread of disease (Perdue et al., 2003). Today, De Leeuw & Simos (2017) point out that the spatial features of the built environment trigger health inequalities. Thus, for a comprehensive understanding, besides social and economic determinants, it is crucial to cast light on the spatial determinant of the issue.

Frumking et al. (2004: 2) affirm that health inequalities encompass a spatial component as “land use and transportation interact to affect many aspects of human activities, their well-being and health”. It is noteworthy that, the presentation of deleterious genetic traits can be triggered by the social and built environments

¹ The concept of built environment refers to the “man-made structures, features, and facilities viewed collectively as an environment in which people live and work” (Oxford Living Dictionaries, 2017).

(Bravemann and Gottlieb, 2014). Moreover, the Centre of Disease Control and Prevention (2011) highlights that the built environment affects mental and physical health. Melis et al. (2016) emphasize the correlation between the characteristics of the urban structure² and the consumption of antidepressants. Furthermore, Jackson (2003) highlights that specific characteristics of the built environment such as transportation pattern and land-use affect individual's health status. Finally, it is noteworthy to highlight that land-use and local legislation interact with each other, shaping the built environment (Platt, 2014). According to these findings, Fig. 1 below depicts the three crucial components of the built environment; interacting with each other they affect human health.

Fig. 1: Components of the Built Environment.



Source: Author's elaboration.

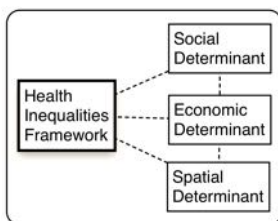
The Transportation Research Board of Washington (TRB, 2005) highlights that the

² Such as density, accessibility by public transport, accessibility to services, green and public spaces.

spatial features of the built environment influence the level of individuals' physical activity. In addition, Florida (2016) associates the number of people who practice physical activities with the commuting patterns of public transportation. Conversely, he argues that there is an inverse relationship between the number of people who practice fitness and the number of people who drive to work alone. Thus, the role of the public transportation as a facilitator for health is crucial.

1.3. A Framework for Health Inequalities

Fig. 2: Health Inequalities Framework.



Source: Author's elaboration.

As emerged in the relevant literature, health inequalities encompass a social, economic, and spatial determinant (Fig. 2) that influence on individuals' health. Specifically, causes such as low educational level, income and occupational class, design features of the built environment, land-use patterns, lack of public transportation, and lack of accessibility to green and public spaces seems to be triggering causes of health inequalities.

Tab. 1: Health Inequalities Framework:
Determinants and Triggering Causes.

DETERMINANT	TRIGGERING CAUSES
Social	Low Social Position; Low Education Level; Cultural Factors;
Economic	Low Occupational class; Low Income;
Spatial	Design Features of the Built Environment; Single land-use; Lack of Public Transportation; Lack of Green and Public Spaces.

Source: Author's elaboration.

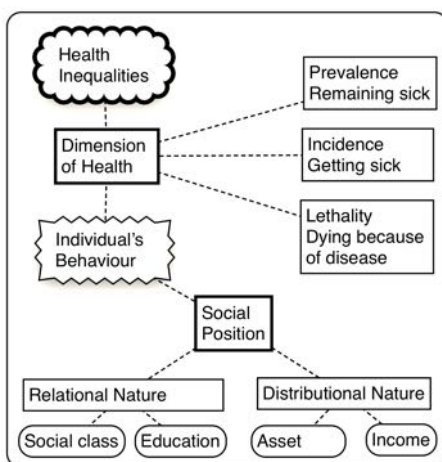
According to these findings, the author of this study proposes the Health Inequalities Framework (Tab. 1). Each determinant contributes to the magnitude of the issue whilst interacting with other determinants through time. Hence, it's crucial to think about the proposed framework as a dynamic system.

1.4. Health Inequalities in Italy

The OECD (2016) reports that a substantial share of people in Italy reports unmet medical and dentist needs for economic reasons. ISTAT (2015: 69) affirms that "in Italy life expectancy is one of the highest in Europe (EU 28) and longevity continues to increase." Still, according to ISTAT (2015) the quality of life in Italy did not improve, but returned to 2011 levels. Also, ISTAT *bes 2015 report* emphasizes that socioeconomic disparities in Italy are even more

evident at the inter-regional level, where differences are increasing between the regions of the North, the Center and the South.

Fig. 3: Health Inequalities and Dimensions of Health.



Source: Author's elaboration.

Costa et al. (2014) depict the Italian context by highlighting how individual's social position affects all the dimensions of health, thus, triggering health inequalities. Specifically, they (2014: 18, author's translation) affirms that:

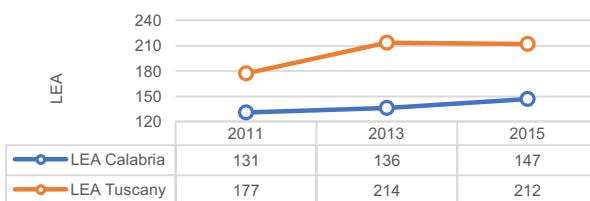
"In Italy, there are...inequalities...in all dimensions of health - the incidence (getting sick), the prevalence (remaining in the disease state), lethality (dying because of the disease) - and all the dimensions of the social position, both that of a relational nature centered on the ability to control the available resources (social class and educational credentials), and those of distributive nature of the resources themselves such as income and assets held."

Adopting this theoretical lens, the author of this study proposes to capture health inequalities through Fig. 3 that depicts how individual's social position influences its behaviour, making himself exposed to health inequalities in all dimensions of health.

1.5. The High Exposure of the Calabria Region to Health Inequalities

In 2015, the health care system in the Calabria region lagged behind northern ones such as Tuscany (Graph. 1), the leading region in terms of health care performance in Italy. As evidence, according to a specific indicator³ developed by the Italian Ministry of Health (Livelli Essenziali di Assistenza - LEA, or Basic Assistance Levels) in 2015, the gap in health care performance between Calabria (147) and Tuscany (212) reached 65 points.

Graph. 1: LEA comparison between Calabria and Tuscany.



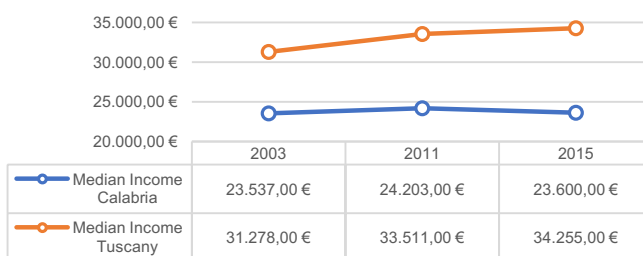
Source: Author's elaboration of Ministero della Salute data.

To highlight disparities between the two regions, since 2003 the median income of the

³ <http://www.quotidianosanita.it/allegati/allegato411529.pdf>

Calabria region is severely lower than Tuscany (Graph. 2). Also, while the median income value in Tuscany has been increasing since 2003, in Calabria the value has declined from 2011, reaching 23,600 Euro per capita in 2015, versus 34,255 Euro per capita in Tuscany in the same year. Certainly, such enormous income disparities represent an indicator of the potential exposition of Calabria region to health inequalities.

Graph. 2: Median Income comparison between Calabria and Tuscany.



Source: Author's elaboration of ISTAT data.

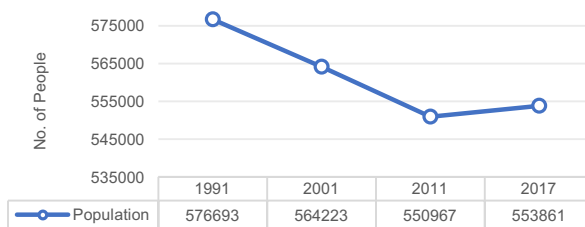
1.6. The Metropolitan City of Reggio Calabria and the Role of *Place* for Health

The Metropolitan City⁴ of Reggio Calabria (RC) is located on the southern edge of the Calabria Region, and, reflecting the regional trend, it seems to suffer a persistent socioeconomic

⁴ On the 7th April 2014, the Italian Government enacted the Law n. 56 on Metropolitan Cities, replacing 14 provinces, among these Reggio Calabria, and their provincial governments with a metropolitan government.

stagnation, and demographic problems. As evidence, the Metropolitan population is steadily declining from 1991 to 2011 (Graph. 3). In 2017 the population grew to 553,8613 people (ISTAT, 2018) from 550,967 in 2011; meaning that in 6 years the metropolitan population grew just ~1%.

Graph. 3: Population in the Metropolitan City of Reggio Calabria.

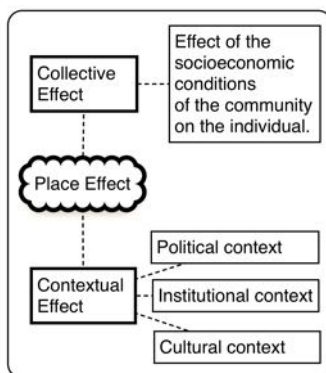


Source: Author's elaboration of ISTAT data.

ISTAT *8milacensus* report (2011) points out that the metropolitan population is aging, educational levels are below the national average, the metropolitan participation to the labour market is below the national average, and unemployment rate reached 22.4%. In addition, ISTAT (2011) highlights that, in 2011, the value of the *material* and *social vulnerability* index of the Metropolitan City of RC was 100.3, one point above the national value at 99.3. Undeniably, all these factors are relevant indicators of the socioeconomic issues that the Metropolitan City of RC is experiencing. Such issues are the same emerged in this study as the triggering causes of health inequalities, among

these, low income and educational levels, and unemployment.

Fig. 4: The Place Effect.



Source: Author's elaboration.

From the relevant literature emerges that the socioeconomic conditions of the local community as a whole affect individual's health. This phenomenon is described by Kawachi et al. (2014) as the *collective* effect that is one of the two components of the *place* effect (Fig. 4). Kawachi et al. (2002) argue about the role of the *place effect* for health inequalities. The *place effect* encompasses two components, namely, a *collective* and *contextual* effect. Specifically, the collective refers to the influence that the socioeconomic conditions of the community as a whole exert on the individual. While the contextual effect refers to the cultural, political, and institutional dimensions of the specific place. In the light of this, we can say that the

critical socioeconomic conditions of the Metropolitan City of Reggio Calabria are triggering the *collective* component of the *place effect*, intensifying the degree of exposure of the Metropolitan community to health inequalities.

2. ACE MODEL: AN INCLUSIVE PARADIGM TO MITIGATE HEALTH INEQUALITIES

As a direct response to the *place effect*, and the growing socioeconomic issues, occurring in the Metropolitan City of Reggio Calabria, a non-profit organization (Fig. 5), Associazione Calabrese di Epatologia (ACE) opened the first space in order to deliver free health care services for the local community.

Fig. 5: ACE's members.



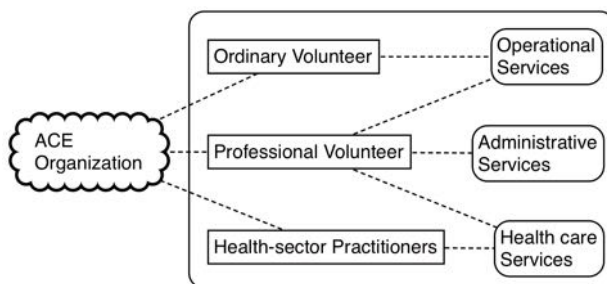
ACE operates through the ACE MODEL, exemplifying a civil society and non-profit led approach for mitigating health inequalities at local level in the Metropolitan City of Reggio Calabria. It is noteworthy to say that, during the observations conducted for this study, the author perceived ACE's organization as inclined to social inclusion and enthusiastic to foster public debate; definitely a conducive environment for running initiatives such as the ACE MODEL which is an endogenous and

spontaneous civil society's reaction to the local socioeconomic issues, relying on the value of *solidarity*.

2.1. About ACE

ACE organization (Fig. 6) encompasses ordinary and professional volunteers, providing operational and administrative services, and health-sector practitioners employed (long-term) by ACE for delivering free healthcare. Also, local civil society representatives provide ACE with specific legal and administrative services for free.

Fig. 6: ACE's organization.



Source: Author's elaboration.

Besides delivering free health care, ACE carries out research and training activities, and conferences⁵. Moreover, ACE boasts several collaborations with high-level institutions such

⁵ <http://www.associazionecalabresepatologia.it/formazione.asp>

as the Istituto Superiore di Sanità (ISS), Italian National Research Council, NCDRisc, the University of Milano, and, recently, with the Department of Epidemiology of Shandong in China. As an evidence of the relevance of their researches, the results of the studies carried out by ACE were published in major scientific journals⁶, among these *Hepatology*, the *American Journal of Epidemiology*, and *Lancet*. Furthermore, in 2017, ACE established a partnership with the *Mediterranean University of Reggio Calabria*, supporting the initiative *The Right to Health in the Mediterranean*. ACE provides free health care for the university campus, including students, professors, staffs, and locals. It is a replica of the ACE MODEL within an institutional context.

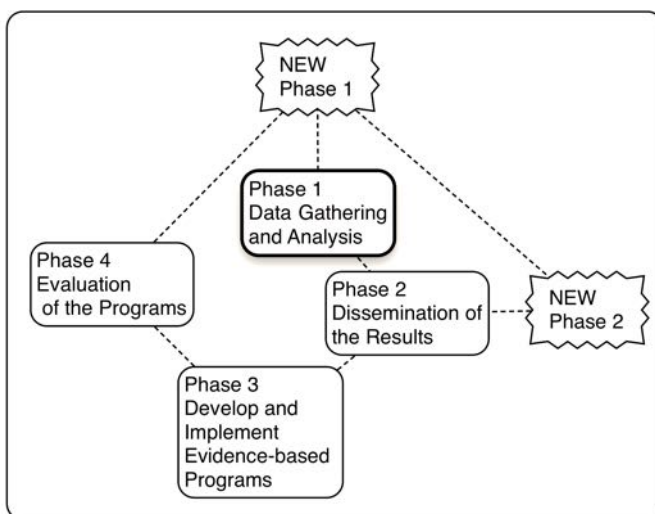
ACE operates through a specific pattern for developing prevention and health-related programs at local level. According to the interview of a key volunteer, this pattern resembles a spiral-shaped scheme because it reaches a growing level of knowledge through time (Fig. 7). To begin with, ACE gathers local health-related data through epidemiologic studies (Phase 1); then, it disseminates the results to the local community, and health sector stakeholders (Phase 2); moreover, supported from the empirical findings, the organization develops and implements evidence-based programs to tackle the issues identified (Phase

⁶ <http://www.associazionecalabresepatologia.it/content.asp?contentid=641>.

3); and, finally, ACE evaluates the impact of the programs implemented. Phase 4 is done as a means to capture the changes triggered by the program and also to shape more effective programs in the future (NEW Phase 1, 2, 3, and 4).



Fig. 7: ACE's Spiral-shaped Pattern.



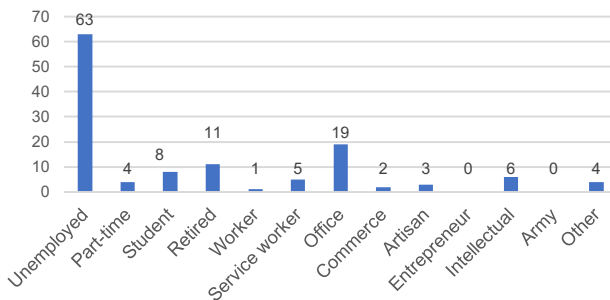
Source: Author's elaboration of the information gathered from the interview to key ACE's members.

2.2. The ACE MODEL

ACE operates through the ACE MODEL, exemplifying a civil society and non-profit led

and inclusive paradigm for mitigating the negative place effect occurring in the Metropolitan City of Reggio Calabria.

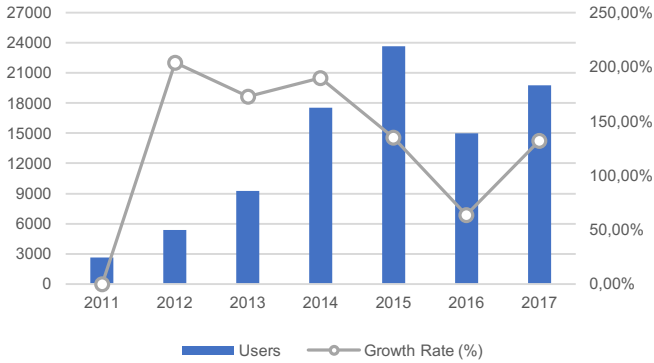
Graph. 4: Accesses by occupational position.



Source: Author's elaboration of the results of the survey.

According to the results of the survey conducted for this study, ACE effectively delivers free health care services to individuals more exposed to health inequalities for socioeconomic reasons, namely, unemployed people (Graph. 4). Interestingly, it seems that mid-income individuals doing office-jobs also perceive ACE as a high-quality vector for delivering health care, not just for its *gratuity*. As evidence, users accessing the ACE MODEL are mostly unemployed (50% of the 126 surveyed), while 8.7% of respondents are retired, 6.3% are students, 15% of respondents exert *office* jobs, and 4.7% practice intellectual jobs.

Graph 5: ACE MODEL's accesses from 2011 to 2017.

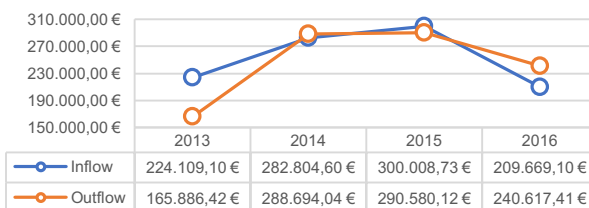


Source: Author's elaboration of data retrieved from ACE organization.

In 2015, the ACE MODEL accounted for 23,653 accesses. Graph. 5 above provides data on the annual users' accesses. Since its inception, the number of accesses in 2012 has skyrocketed at a growth rate of 204% within the first year of the scheme alone; meaning the immediate response of the local community was enormous. In 2015, the growth rate of accesses declines, since the ACE MODEL reached a total amount of 23,653 accesses; too many for the capacity of the organization. Moreover, from 2015 to 2016, the rate of growth of users reflects an occurred shock as ACE's activities shut down for 6 months. Nevertheless, although the data only accounts for 8 months, the total amount of accesses reached 19,800 a year later in 2017. Generally, we can say that, from 2011 to 2015,

the ACE MODEL gained about 5,000 people yearly.

Graph 6: ACE MODEL's cash flow.



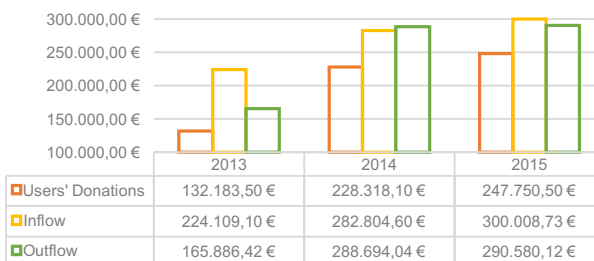
Source: Author's elaboration of data retrieved from ACE's Website.

The ACE MODEL is an economically sustainable initiative. Indeed, data plotted in Graph. 6 above, about ACE's cash flow, prove that, from 2013 to 2015, ACE was an economically viable vector for delivering health care. As evidence the users' donations, in exchange for health care, seem to balance expenses to run the ACE MODEL. However, in 2016, outflow overwhelmed inflow because ACE invested a major share of its previous collected economic resources for acquiring a plot of land for future projects, renovating the ACE Headquarter, including new furniture, and to improve the existing medical equipment. Also, as previously mentioned, in 2016 the ACE MODEL shut down for 6 months thus data reflect the occurred stop.

ACE MODEL's cash flow (Graph. 6, 7) encompasses different sources. Firstly, *inflows*

reflect the sum of the User’s donations, and contributions provided by foundations, private organizations, and local community members. In 2015, User’s donations accounted for 82,5% of the total inflow (Graph. 7), namely, 300,008.00 Euro. ACE invests the entire inflow into improving its human, and physical resources. Finally, *outflows* accounts for expenses for delivering health care services such as economic support to ACE’s professional volunteers, medical equipment, and improvement to the medical spaces.

Graph 7: ACE MODEL’s cash flow detail.



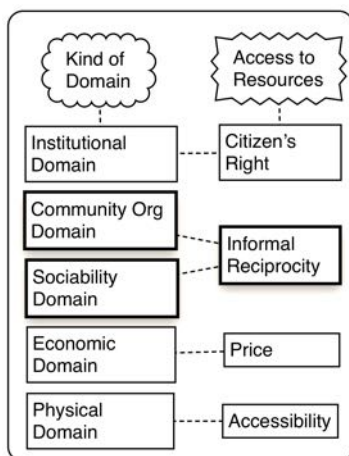
Source: Author’s elaboration of data retrieved from ACE’s Website.

2.3. The *Gift to Gift* as an Alternative to Price for Accessing the Economic Domain of Pellaro

The ACE MODEL is based in Pellaro, a densely populated neighbourhood in the Southern area of the Metropolitan City of Reggio Calabria. According to Bernard et al. (2014) the concept of neighbourhood transcends the physical dimensions as it can be seen as the sum of

domains (Fig. 8) such as the institutional domain, community organizations domain, local sociability domain, economic domain, and the physical domain which refers to the built environment.

Fig. 8: The Neighbourhood Domains



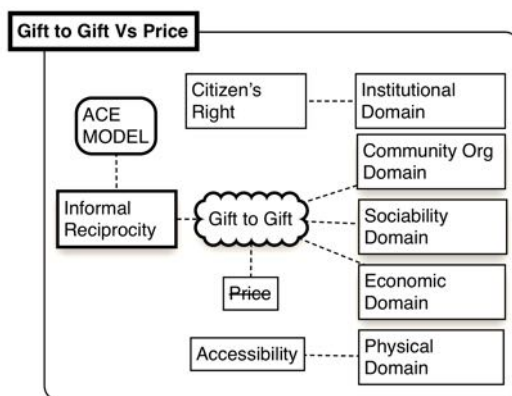
Source: Author's elaboration.

Bernard et al. (2014) argues that the capacity of the residents to acquire resources from each neighbourhood domain influences their health. Also, Bernard et al. (2014) affirm that people gain access to the different domains through certain set of rules. Community organization and local sociability domains are accessed by *informal reciprocity*, the institutional domain is accessed by the *citizenship's right*, while the economic domain is accessed by *price*, and the

physical domain is accessible in terms of accessibility.

Holding in mind this classification of neighbourhood, the author of this study sustains that the ACE MODEL broke down economic barriers to access the economic domain of the neighbourhood of Pellaro, allowing disadvantaged individuals within the local community to gain access to health care through *informal reciprocity* as an alternative to *price*.

Fig. 9: Gift to Gift as an alternative to price for accessing the economic domain.

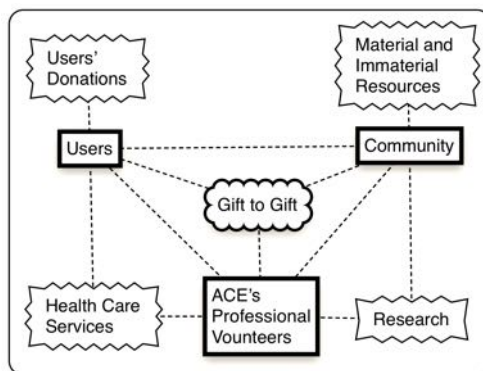


Source: Author's elaboration.

The author of this study describes such informal reciprocity-based model as the *Gift to Gift* (Fig. 9); a non-profit's alternative to price for connecting low-income people to the economic domain of the neighbourhood within they live.

ACE also benefits from other forms of Gifts (Fig. 10) from the local community, namely, material and immaterial resources such as commodities, and specific human capabilities. For instance, in its early stage, the ACE Headquarter was renovated thanks to the efforts of community members who fixed and painted the walls, replaced damaged windows and doors, and brought their own furniture to revitalize the space.

Fig. 10: The *Gift to Gift* among ACE, Users and Local Community.



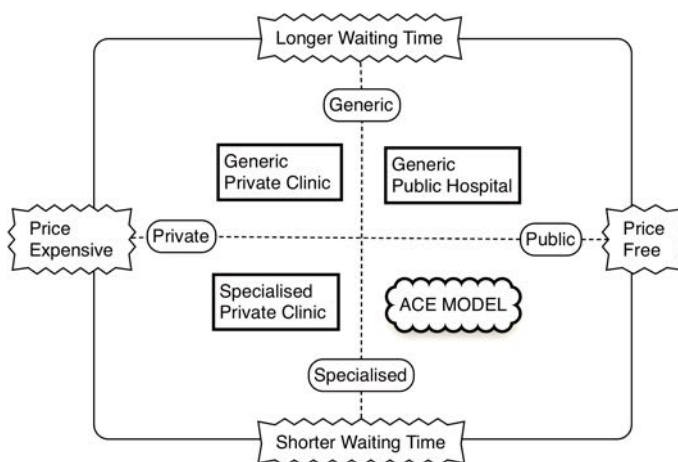
Source: Author's Elaboration.

Indeed, such informal reciprocity-based market model relies not on transactions with an established price, but on spontaneous donation, or Gift. According to Mauss (1966), the Gift is a form of exchange that obligates the receiver to reciprocate. Essentially, the dynamics of informal reciprocity occurring within the ACE MODEL resemble this form of exchange. Users' donations work as a Gift to the organization

which, in counterpart, delivers free health care services to users (Fig. 9). Also, as emerged in the survey of this study the economic model established by ACE is driven by solidarity and gratitude (Graph. 16 in Appendix).

2.4. The ACE MODEL as an Outstanding Paradigm of Local Health Care System

Fig. 11: Classifying the ACE MODEL among other health care systems.

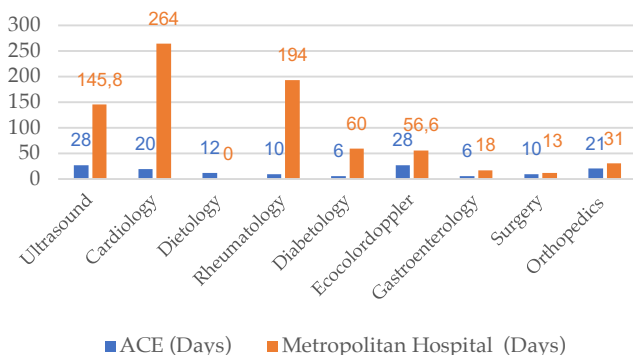


Source: Author's elaboration.

Thanks to the *Gift to Gift* the ACE MODEL embodies an outstanding paradigm of local health care system (Fig. 11); a hybrid composition of a highly accessible clinic, but free. Indeed, we can classify health care services as a function of *accessibility* by *waiting time* and *price*. While the former refers to the quantity of

waiting time to access healthcare (reservation and availability by waiting list), the latter refers to the economic accessibility of healthcare by price. Through the interception of *waiting time* and *price* (Fig. 11), the author proposes to classify the ACE MODEL, among other mainstreaming healthcare models⁷, as a specialised, free and highly accessible healthcare system. To begin with, although specialised private clinics have short waiting time as they focus on a specific quantity of services, they require an expensive *price* to be accessed. Following on from this, generic private clinics have longer waiting list, as they deliver more services, but still by paying high prices. Finally, generic public hospitals are free, but they require long waiting time to be accessed.

Graph 8: “Waiting Time” comparison between ACE and Metropolitan Hospital of RC.



Source: Author’s elaboration of data retrieved from the website of the Metropolitan Hospital of RC.

⁷ <http://www.associazionecalabresepatologia.it/content.asp?Catid=232&contenttype=GENERALE>

The Graph. 8 depicts the *average waiting time*⁸ comparison between the ACE MODEL and the Metropolitan Hospital of Reggio Calabria. An *ultrasound*, which is the most common service delivered, takes just 28 days to be accessed at ACE, compared to the 145,8 days (average value) wait for the equivalent service at the Metropolitan Hospital. Thus, the ACE MODEL boasts much shorter waiting times whilst delivering specialised services⁹ for free. In other words, an alternative to the public and private local health system.

2.5. The ACE Headquarter and the Foundation

ACE has achieved two major milestones: in 2011, the ACE Headquarter (Fig. 12), and, in August 2017, the institution of a foundation of participation, namely, the Fondazione per la Medicina Solidale.

In 2011, the ACE Headquarter was an abandoned, and vandalized, building in Pellaro, but, aware of the potential opportunity to use the abandoned space for social purposes, ACE and local community (Fig. 13) came together to renovate the building. The Fig. 14 shows the ACE Headquarter, before and after the renovation. Today, the renovated building hosts the space where ACE delivers free health-care

⁸ Average waiting time calculated by the author on the data retrieved at http://www.ospedalerc.it/files/old/Prime%20disponibilita%20per%20prestazione_201610.pdf

⁹ Ultrasound, cardiology, dietology, rheumatology, vascular surgery, diabetology and endocrinology, psychology, neurology.

(Fig. 15, 16). Also, the ACE Headquarter is a space where the decision-making process occurs, bringing together in the ACE Assembly, professional and ordinary volunteers, members of the community, and other civil society's representatives. The ACE Assembly is a non-profit arena where everyone has a say. According to direct observations for this study, decisions are horizontally agreed, and shaped to meet the collective desire of the assembly.

Fig. 12: Entrance of the ACE Headquarter.



Fig. 13: ACE and the local community.



Fig. 14: The ACE Headquarter: before and then.



Fig. 15: Inside the ACE Headquarter.



Fig. 16: Health-sector practiser working.



It seems that the environment created inside ACE Headquarter is a successfully met objective. According to the information gathered during the on-field research, volunteers affirm that the mission of ACE was to create a vibrant working environment, emphasizing the role of space to foster social relationships (Fig. 17).

Fig. 17: Social space.

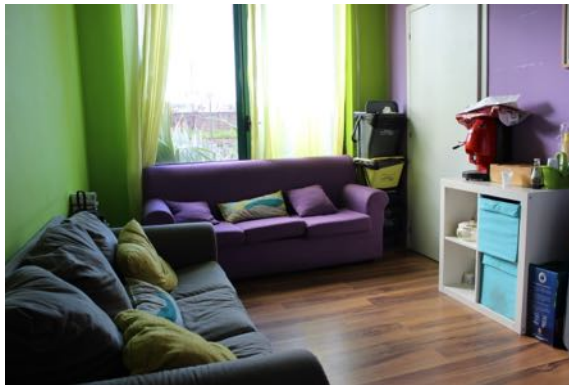


Fig. 18: Green spaces.



Fig. 19: Vibrant colours.



Fig. 20: Vibrant colours.



Surrounded by green spaces (Fig. 18), the ACE Headquarter is easily accessible, its internal spaces feature vibrant colours (Fig. 19, 20), and *art gift* (Fig. 21) donated from local and international artists, and community members supporting ACE.

Fig. 21: Art Gifts.



Fig. 22: Reception.



ACE Headquarter is a single floor building encompassing a reception (Fig. 22), recreational spaces for volunteers (Fig. 23), attending room for users (Fig. 24), and medical ambulatories (Figg. 25, 26, 27, 28, 29) provided of non-

invasive medical equipment (Fig. 30). Health-sector practitioners employed by ACE deliver health care to users within the medical ambulatories, while ordinary and professional volunteers provide operational and administrative services.

Fig. 23: Recreational space for volunteers.

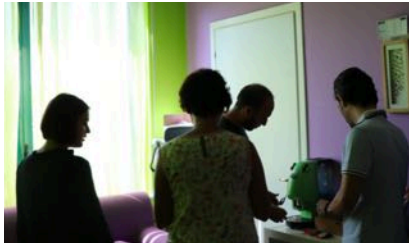


Fig. 24: Attending room for users.



Fig. 25: Medical ambulatory.



Fig. 26: Medical ambulatories.



Fig. 27: Medical ambulatory.



Fig. 28: Medical ambulatory.



Fig. 29: Medical ambulatory.

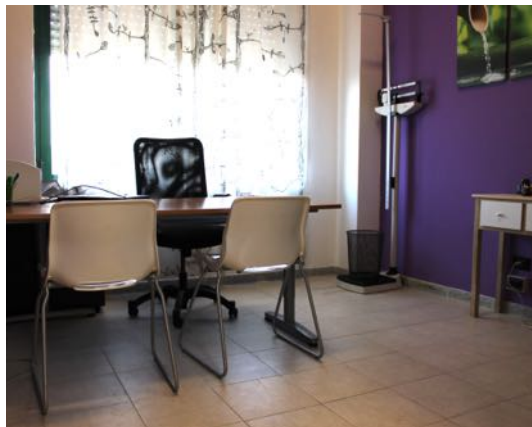


Fig. 30: Medical equipment.



In 2017, the core leading group of ACE, along with other community members, started a foundation of participation, namely, the *Fondazione per la Medicina Solidale*. The Foundation counts among its assets a building donated by a donor which is now the *Osservatorio delle Disuguglianze della Salute* (ODS). According to ACE, the ODS represents the place where different figures will work

together to identify and monitor health inequalities at local and metropolitan level.

The Foundation is committed to the realization of the Citadel of Knowledge and Wellbeing (Fig. 31). An innovative and social-oriented building within a rural area boasting the traditional Mediterranean landscape features. The project will provide spaces for cultural and scientific purposes as well as an outdoor and indoor congress hall to foster public debate and cultural development. Currently, in the same area, the foundation is working to recover the existing vineyards.

Fig. 31: Citadel of Knowledge and Wellbeing.



2.4. Survey to ACE's Users

The survey has three aims; firstly, it is intended to profile the average user of the ACE MODEL, then, it is shaped to explore the socioeconomic benefits received by users, and, finally, to capture the dynamics that the *Gift to Gift*

mechanism for exchanging resources between users and ACE. In support of this study, patterns in the answers will be assumed as explanatory. The complete questionnaire is in the appendix at the end of this book.

From August to November 2017, a total amount of 126 closed-end questionnaires, encompassing 15 questions each one, were taken by ACE's Users. 72,2% of surveyed are female, and 26,9% male. Moreover, 15% of responders were aged from 50 to 54, and 14,9% from 35 to 39. Generally, it seems that people between the ages 20 to 64 chose to use ACE's free health care. Finally, 42.8% of responders have a high-school diploma, 27,7% mid-school, and 19.8% bachelor degree.

At the time of the survey the 15% of people access the ACE MODEL since 2011, 14.2% since 2013, while 23% of users where accessing it for the first time. According to the results of the questionnaires, the ACE MODEL proved to be a successful resource for the 126 surveyed of the Metropolitan community from Reggio Calabria. As evidence, the findings point out that the 85.7% of respondent feel safer thanks to ACE, 71.4% of respondents chose ACE for the professionalism; just 13% because is free. Thus, responders perceive the ACE MODEL as a high-quality vector to deliver health-care services. Also, people want to be involved by ACE, as evidence, 76,9% of responders want to have more information on prevention of diseases,

and the 96,8% of the responders want to be informed on periodic checks; meaning that people care about their health if they can afford it. Also, 48.4% of users knew that ACE carries out scientifically research, and the 94,4% users think that such research activities are important.

The economical mechanism sustaining the ACE MODEL is *Gift to Gift*. This is an informal reciprocity and *solidarity-based* mechanism that encourage users to donate a *gift* according to their socioeconomic condition, and sense of *gratitude*. As evidence, 57.9% of the respondents asserted that solidarity is the major driver leading them to make a donation, and 73% of responders would like to donate more, but they just cannot. Just 1% of users never made a donation to the organization.

ACE provides people access to the economic domain of health, and, more generally the place where they live. This happens because, through money saved, users are able to afford other goods. As evidence, 38.8% of users buy groceries with the money saved, 27% spent the saved money for other health-care, 24,6% on commodities and services, and 7% on kid's education. Generally, 64.2% of responders affirmed that the ACE MODEL improved their lifestyle. Consequentially, we can say that the ACE MODEL expanded the economic capacity of the individuals as they have more money to afford alternative goods; hence, can afford to *choose*.

The ACE MODEL is expanding within the local realm thank to *word to word*. 48.4% of respondents heard of ACE from friends, 29.3% from relatives. Still, interestingly, in terms of assessing users' perception of the service and support for expansion of the ACE MODEL, 92.8% of users have recommended it to others. Thus, it seems that the 92.8% of users experienced a positive perception toward ACE.

Question no. 14 (Graph. 21) is supposed to *explore* if users experienced a sense of belonging to ACE as a community. The findings reveal the existence of an *ACE community*. As evidence, 83,3% of respondents feel part of the ACE community. Finally, to reinforce the trust-based dimension on which the ACE MODEL relies, 85.7% of respondents feel safer for their health thanks to ACE's free health care. Also, 60.3% of surveyed people perceived the ACE Headquarter as *professional*, while 29,36% as *cozy*; meaning that ACE was successfully able to shape an overall conducive environment for the wellbeing of people.

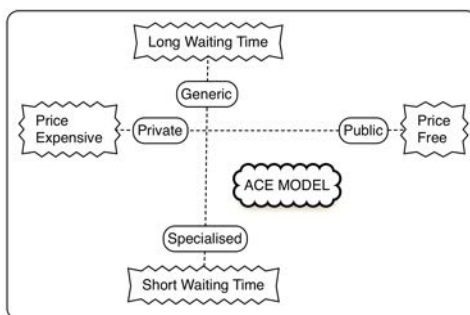
2.6. Replicability

The positive findings of this study empower the ACE MODEL as a best practice to replicate in the real world. It is noteworthy to say that the ACE MODEL is already replicating within the Metropolitan City of RC in Villa San Giovanni. Indeed, on December 2017, the non-profit organization SMAIL implemented the initiative

“Aiutateci ad Aiutare¹⁰” proposing high accessible health care both by *price* and *waiting time* to access.

The author suggests that two are the main dimensions emerged as fundamental for the ACE MODEL, namely, *high accessibility to health care by time and price* (Fig. 32), and the *capacity to practice the Gift to Gift* (Fig. 33) as an alternative means to price for making transaction of resources.

Fig. 32: High accessibility to health care by time and price.



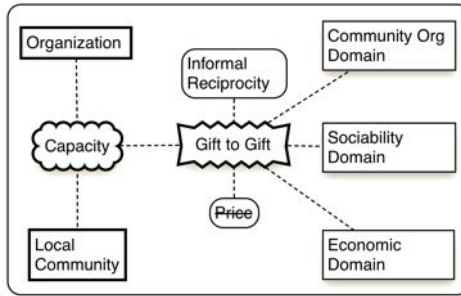
Source: Author’s elaboration.

Fig. 33 depicts the main requirements to replicate the *Gift to Gift*, namely, the capacity of the *organization* and *local community* to practice informal reciprocity as a mean of exchanges. Also, the analysis of the ACE MODEL case

¹⁰ <http://www.strettoweb.com/2017/12/villa-san-giovanni-nasce-lo-studio-polispecialistico-di-medicina-solidale/639600/>

study showed that *solidarity* and *gratitude* are the driving forces fuelling *Gift to Gift*; hence, trust to build community consensus around the *Gift to Gift* model, between community and the organization, is a fundamental requirement.

Fig. 33: Capacity to replicate the Gift to Gift.



Source: Author's elaboration.

3. CONCLUSIONS

As emerged in the first chapter, health inequalities encompass socioeconomic and spatial determinants triggered by causes such as low-income and educational levels, social position, occupational class, and finally the place effect. Specifically, it seems that disadvantaged individuals are more likely to be affected by health inequalities.

The Calabria region lags behind the northern ones, and likewise, the within Metropolitan City of Reggio Calabria seems to have suffered from persistent socioeconomic issues since 1991. In this critical scenario, the magnitude of the *place effect* for health is amplified, thus, the significance of the ACE MODEL for the metropolitan community is even more relevant.

The results of the case-study analysis suggest that ACE MODEL's free health care was used by people more exposed to health inequalities for socioeconomic reasons. As a matter of fact, the ACE MODEL allowed disadvantaged individuals to gain access to high-quality and free health care through *Gift to Gift* as an informal reciprocity-based market mechanism alternative to price. In conclusion, the finding suggests that the ACE MODEL proved to be a socially inclusive and economically viable model of local health care system able to mitigate health inequalities.

References

- Bernard, P. Charafeddine, R., Frohlich, K. L., Daniel, M., Kestens, Y., and Potvin, L. (2007). Health Inequalities and Place: A Theoretical Conception of Neighbourhood. *Social Science and Medicine*, 65, 1839-1852.
- Braveman, P. and Gottlieb. L. (2014). The Social Determinants of Health: It's Time to Consider the Causes of the Causes. *Public Health Reports*, 129, 19-31.
- Centre of Disease Control and Prevention (2011). Impact of the Built Environment on Health. Retrieved at <https://www.cdc.gov/nceh/publications/factsheets/impactofthebuiltenvironmentonhealth.pdf>
- Costa, G. et al. (2014). *L'Equità nella Salute in Italia: Secondo rapporto sulle disuguaglianze sociali in sanità*. Milano, Italia: Franco Angeli.
- De Leeuw, E. and Simos, J. (2017). *Healthy Cities: The Theory, Policy and Practice of Value-Based Urban Planning*. New York, NY: Springer Science +Business Media LLC.
- Florida, R. (2016, January). America's Great Fitness Divide on *CityLab.com*. Retrieved from

<https://www.citylab.com/equity/2016/01/america-as-great-fitness-divide/414558/>

- Frumking, H., Lawrence, F. & Jackson, R. (2004). *Urban Sprawl and Public Health: Designing, Planning, and building for Healthy Communities*. Washington DC: Island Press.
- Hero, J.O., Zaslavsky, A.M., and Blendon, R.J. (2017). The United States Leads Other Nations In Differences By Income In Perceptions Of Health And Health Care. *Health Affairs* 36 (6): 1032-1040.
- Irwin, A., & Scali, E. (2010). *Action on the social determinants of health: Learning from previous experiences. Social Determinants of Health Discussion Paper 1 (Debates)*. World Health Organization. Retrieved at http://www.who.int/social_determinants/corner/SDHDP1.pdf
- ISTAT (2011). *8milaCensus*. Retrieved at http://ottomilacensus.istat.it/fileadmin/report/080/report_080063.pdf
- ISTAT (2015). *Bes 2015*. Retrieved at <https://www.istat.it/it/files/2015/12/01-Salute-Bes2015.pdf>

- ISTAT (2018). Population in the Province of Reggio Calabria on the 1st January 2017. Retrieved at <http://demo.istat.it/pop2017/index.html>
- Jackson, R. J. (2003). The Impact of Built Environment on Health: An Emerging Field. *American Journal of Public Health*, 93 (9): 1382 – 1384.
- Kawachi, I., Subramanian, S. V., and Almeida-Filho, N. (2002). A glossary for health inequalities. *Journal Epidemiologic Community Health*, 56: 647-652.
- Mackenback, J. P. (2005). Health Inequalities: Europe in Profile. *An independent, expert report commissioned by the UK, Presidency of the EU* (February 2006).
- Mackenback, J. P. (2015). Health Inequalities: Learning how to mind the gap. *Eurohealth, incorporating Euro Observer*, 21 (1): 3 - 7.
- Marmot, M. (2006). Status Syndrome: A Challenge to Medicine. *JAMA*, 295 (11): 1304-1307.
- Mauss, M. (1966). *The gift: Forms and functions of exchange in archaic societies*. London: Cohen & West.
- Melis, G., Gelormino, E., Marra, G., Ferracin, E., and Costa, Giuseppe. The Effect of the Urban Built Environment on Mental Health: A Cohort Study in a Large Northern Italian City. *International Journal of*

Environmental Research and Public Health, 12 (11):
14898 – 14915.

National Academies of Sciences, Engineering and
Medicine (2017). *Communities in Action: Pathway to
Health Equity*. Washington, DC: The National
Academies Press.

OECD (2016). *Health at a Glance: Europe 2016 - State of
health in the EU cycle*. *OECD Publishing, Paris*.
Retrieved at
<http://dx.doi.org/10.1787/9789264265592-en>

Perdue, W. C., Stone, L. A., Gostin, L. O. (2003). The Built
Environment and Its relationship to the Public's
Health: The Legal Framework. *American Journal of
Public Health*, 93 (9): 1390-1394.

Platt, R. H. (2014). *Land Use and Society: Geography, Law,
and Public Policy (3rd Edition)*. Washington, DC:
Island Press

Transportation Research Board (2005). Does the Built
Environment Influence the Physical Activity?
Examining the Evidence. *Transportation Research
Board Institute of Medicine of the National Academies*.
Retrieved at
[http://onlinepubs.trb.org/Onlinepubs/sr/sr282.p
df](http://onlinepubs.trb.org/Onlinepubs/sr/sr282.pdf)

Wilkinson, R. and Marmot, M. (2003). *Social Determinants of Health: the solid facts* (2nd edition). Copenhagen, Denmark: World Health Organization. Retrieved at http://www.euro.who.int/__data/assets/pdf_file/0005/98438/e81384.pdf

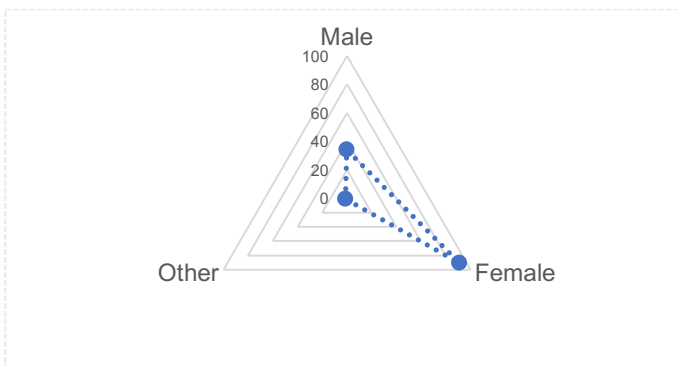
World Health Organization (2017). *11 Facts on health inequities and their causes*. Retrieved at http://www.who.int/features/factfiles/health_inequities/en/

Appendix

Questionnaire to ACE's users.

QA Gender

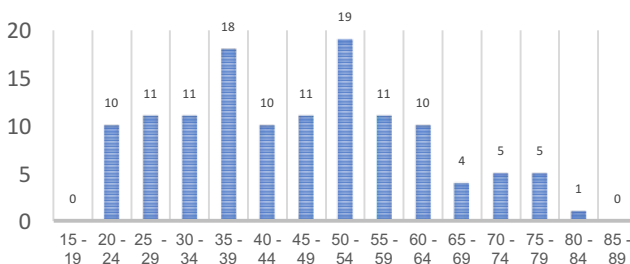
72,2% of surveyed are female, and 26,9% male.



Graph 9: Gender. Source: Author's elaboration.

QB Age

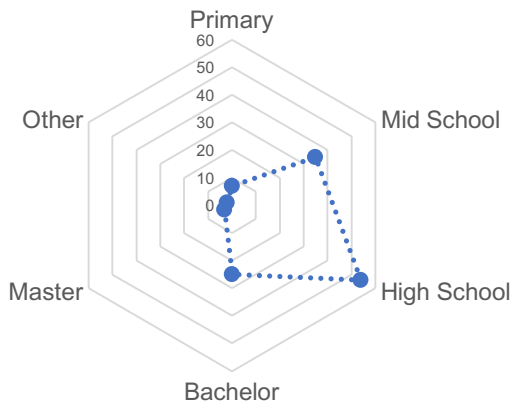
15% of responders from 50 to 54, and 14,9% from 35 to 39. Generally, from 20 to 64, it seems that people chose to use ACE's free health-care.



Graph 10: Age. Source: Author's elaboration.

QC Education

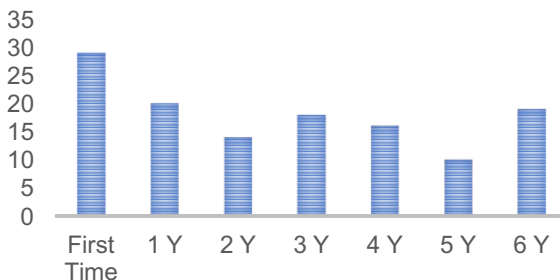
42.8% of responders have a high-school diploma, 27,7% mid-school, and 19.8% bachelor degree.



Graph 11: Education level. Source: Author's elaboration.

Q1 How long have you been an ACE's user?

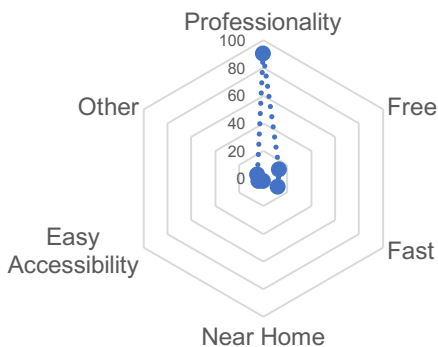
15% of responders from 2011, 14.2% from 2013 demonstrated continuity with ACE's health-care, while 23% of users accessed ACE for the first time.



Graph 12: Question 1. Source: Author's elaboration.

Q2 *Why do you chose ACE's health care services?*

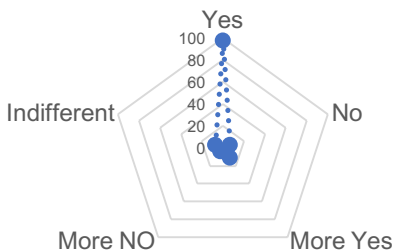
71.4% of responders chose ACE for the professionalism; just 13% because is free.



Graph 13: Answer 2. Source: Author's elaboration.

Q3 *Would you like more information on the prevention of diseases such as diabetes, hypertension, heart disease and cancer?*

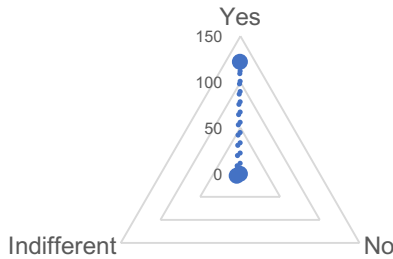
76,9% of responders want to have more information on prevention of diseases.



Graph 14: Answer 3. Source: Author's elaboration.

Q4 *Would you like ACE to inform you about the periodic checks to be carried out for prevention?*

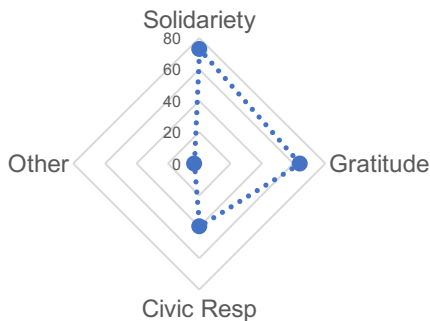
96,8% of the responders want to be informed on periodic checks.



Graph 15: Answer 4. Source: Author’s elaboration.

Q5. *What values encourage you to leave a voluntary donation?*

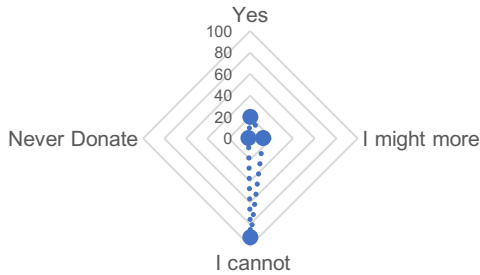
57.9% users sustain that solidarity is the major driver leading them to make a donation, the gift.



Graph 16: Answer 5. Source: Author’s elaboration.

Q6 *Does the donation you leave to ACE fit with the value of the services you receive?*

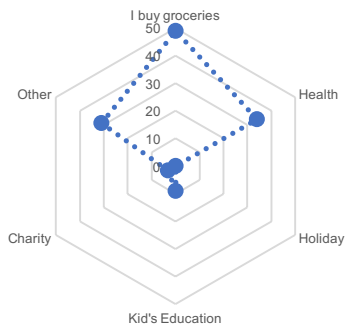
73% of responders would like to donate more, but they just cannot. Just 1% of users never made a donation.



Graph 17: Answer 6. Source: Author's elaboration.

Q7 *How do you use the money you save through ACE?*

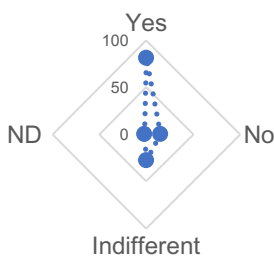
38.8% of users buy groceries with the money saved for health-care, and the 27% spent the saved money for other health-care.



Graph 18: Answer 7. Source: Author's elaboration.

Q8 *Did ACE improve your lifestyle?*

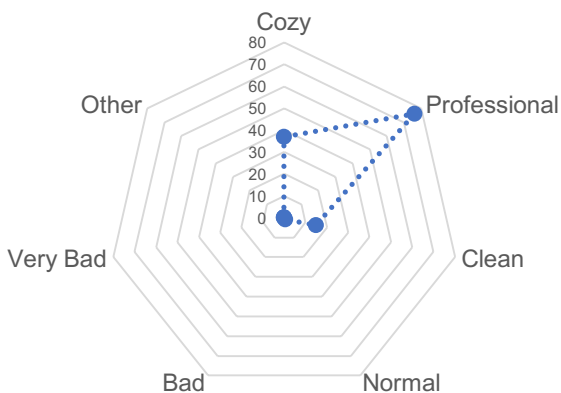
64.2% of responders affirmed that ACE improved their lifestyle.



Graph 19: Answer 8. Source: Author's elaboration.

Q9 *Which of these adjectives best describes the spaces of the ACE Headquarter?*

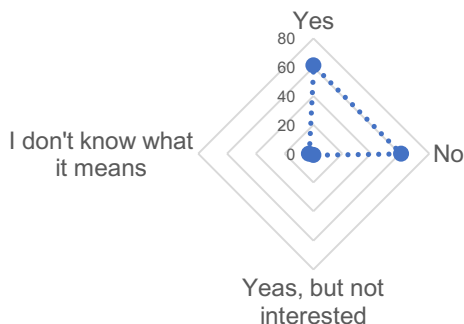
60.3% of users think that ACE HQ is *professional* and 29,36% as *cozy*.



Graph 20: Answer 9. Source: Author's elaboration.

Q10 *Are you aware that ACE carries out scientific research?*

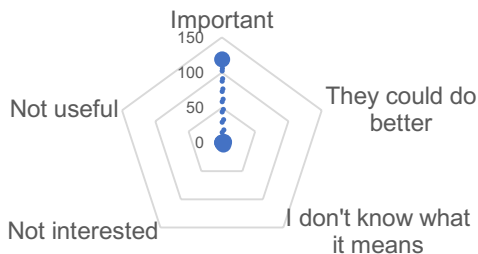
48.4% of users knew that ACE carries out scientifically research.



Graph 21: Answer 10. Source: Author's elaboration.

Q11 *What do you think about the fact that ACE also carries out scientific research?*

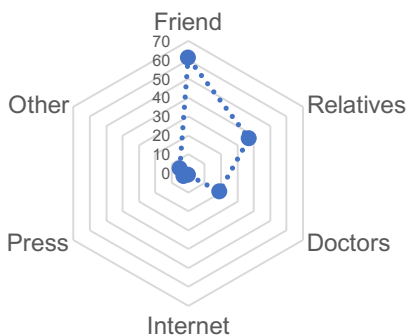
94,4% users think that the research activities carried out by ACE are important.



Graph 22: Answer 11. Source: Author's elaboration.

Q12 *How did you know of ACE?*

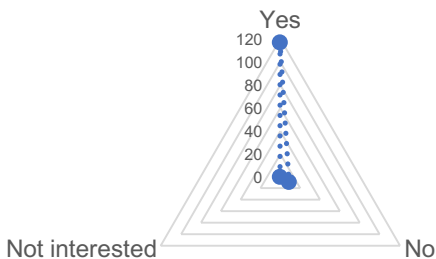
48.4% of users knew ACE from friends, and 29.3% from relatives.



Graph 23: Answer 12. Source: Author's elaboration.

Q13 *Have you recommended ACE to someone?*

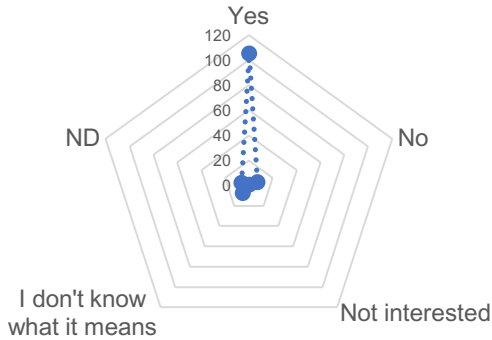
92.8% of users recommended ACE to someone.



Graph 24: Answer 13. Source: Author's elaboration.

Q14 *Do you feel part of the ACE community?*

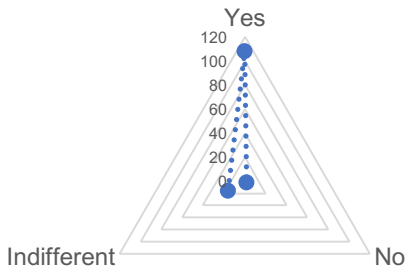
83,3% of users feel part of the ACE Community, as they share its values.



Graph 25: Answer 14. Source: Author's elaboration.

Q 15 *Do you feel safer for your health since ACE?*

85.7% of users feel safer for their health thanks to ACE's free health care services.



Graph 26: Answer 15. Source: Author's elaboration.

Health inequalities are correlated to income and social disparities, access to education, and quality of the *place* where individuals live. This book focuses on an outstanding and inclusive paradigm to mitigate health inequalities at the local level, namely, the ACE MODEL, implemented by the non-profit organization Associazione Calabrese di Epatologia (ACE). Since 2011 ACE delivers free health care to people more exposed to health inequalities for socioeconomic reasons within the Metropolitan City of Reggio Calabria.

Antonio Errigo is an early-stage researcher trained in architecture, urban planning, sustainable urban regeneration, and local economic development.

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