Monitoring the tuning of the «Fertile Family Path» service for overcoming gaps between desire, decision and conception

Mario Cusinato[a], Walter Colesso[a], Enrico Busato[b], and Stefano Gava[b]

[a] *Family health and social counseling Center, Treviso (Italy)*

[b]*Obstetrics and Gynecology Unit, Ca' Foncello Hospital, Treviso (Italy)*

Abstract. The current emergency represented by the fall in the birth rate in Italy and the attention paid to recent studies regarding human infertility led several professionals from different disciplines to discuss the creation and implementation of a new service («Fertile Family Path») to offer to sub fertile couples interested in conceiving naturally by developing awareness of their fertility, supported by a multi-disciplinary team of professionals. The backbone of the multi-disciplinary team is a new, specifically trained role: "the case-care manager of couple fertility awareness" (CCM). The service started at the end of 2017. The scientific committee assessed various aspects of the process. In the first period of activity (36 months), 82 couples contacted the service, enabling the team to calibrate the working methods and test the goals achieved. The first data processed pointed out a variety of needs on the part of couples and the complexity of the path (challenging gaps between desire, decision and conception). Specifically, two aspects stand out: the role of the care manager is appreciated, and the role of the case manager highlights the need for more cohesive team integration.
Keywords: Infertility, Multidisciplinary team, Family fertility path, Fertility awareness, Care-case manager

Correspondence concerning this article should be addressed to:
Mario Cusinato, Family health and social counseling Center, via S. Nicolò 60 – 31100 Treviso (Italy). 0035 389 088 6620; mariocusinato1@gmail.com

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Background and aims

The Fertile Family Path (FFP) is a service offered to infertile and sub fertile couples as a specific response to the Italian emergency represented by the decline in the birth rate. The first inputs came from the discussion in the context of an international meeting on human fertility held in 2015[1]. The work team that implemented the event took up and developed the subsequent proposal, which led three years later to a publication on human fertility, with an interdisciplinary approach (Cusinato & Girotto, 2021) that traces the lines of the service (Busato & Gava, 2021).

At the end of 2017, based on the premises mentioned, the service began at the private family health clinic in Treviso, in collaboration with the Obstetrics and Gynecology Unit of Treviso hospital. The initial three-year period was focused on development of the service and awareness-raising. The Covid 19 pandemic certainly did not help this startup phase: in the first months, a growing number of couples contacted the service, but unfortunately, in the months from February to April 2020, only information calls were received, as well as WhatsApp contacts by the operators to support the path of the couples on board; in the following autumn, some ground was made up, despite all the uncertainties and difficulties due to the second phase of the pandemic.

First stage of implementation of the service

Despite the problems during this period, the service achieved positive goals by developing its mission and operating on several levels. The multi-disciplinary team was launched with progressive adjustments and a new professional figure in the healthcare sector was designed and tested. The training department of the ULSS 2 Marca Trevigiana health board, with the collaboration of the social and health consultancy body, started an experimental two-year period of advanced training for this figure, defined as "case-care manager of couple fertility awareness" (CCM)[2]. The training began in March 2018 and was completed in November 2020, with 20 participants chosen out of the 40 who responded to the call. The CCM health worker has the task of accompanying the couples on the path towards the realization of

[1] Natural Family Planning (NFP). Interfacing biological & Relational Aspect and New Information Technologies". International Meeting: 15-16 October 2015, Park Hotel Villa Fiorita, Monastier di Treviso.

[2] Previously in the years 2017-18, the proposal was made to the Department of Gynecology of the University of Padua to activate a training course on this professional figure. The reception met with resistance from the department council, motivated by the prevalent attention to the development of MAP teams.

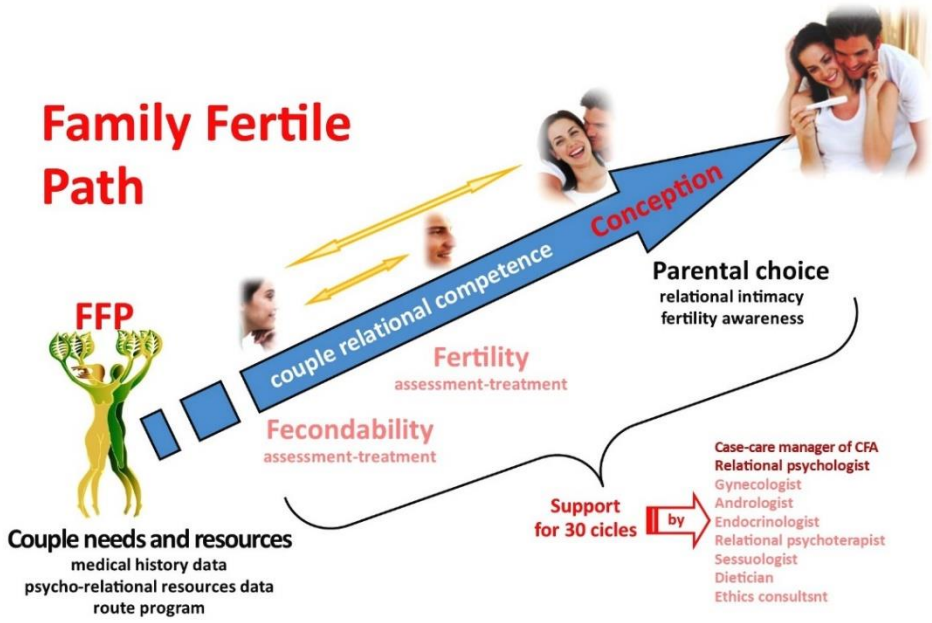
their parenting project (role of "care manager" for fertility awareness) and, at the same time, of integrating the interventions of the specialists from eight health and psycho-relational areas (role of "case manager") useful for overcoming obstacles and achieving "natural conception" in a way able to respect and strengthen the couple's relationship.

From November 3, 2017 to December 30, 2020, about eighty infertile couples contacted the service. The path of those accepted enabled the team to define and improve both the conceptual development and the operating methods of the FFP. This was supported by a scientific committee of researchers and professionals from various health disciplines, which developed the tools necessary to follow the couples in terms of support and assessment.

As a first output, a FFP flowchart was created (Fig 1)

Figure 1.

Flowchart of the "Family Fertile Path" service



This flowchart presents the analysis of the path for accompanying couples committing to overcoming infertility by improving their "fertility awareness". It is not an easy process, and the goal cannot be the same for all: the aim of some couples over time concerns the opportunity to enter parenthood from a different

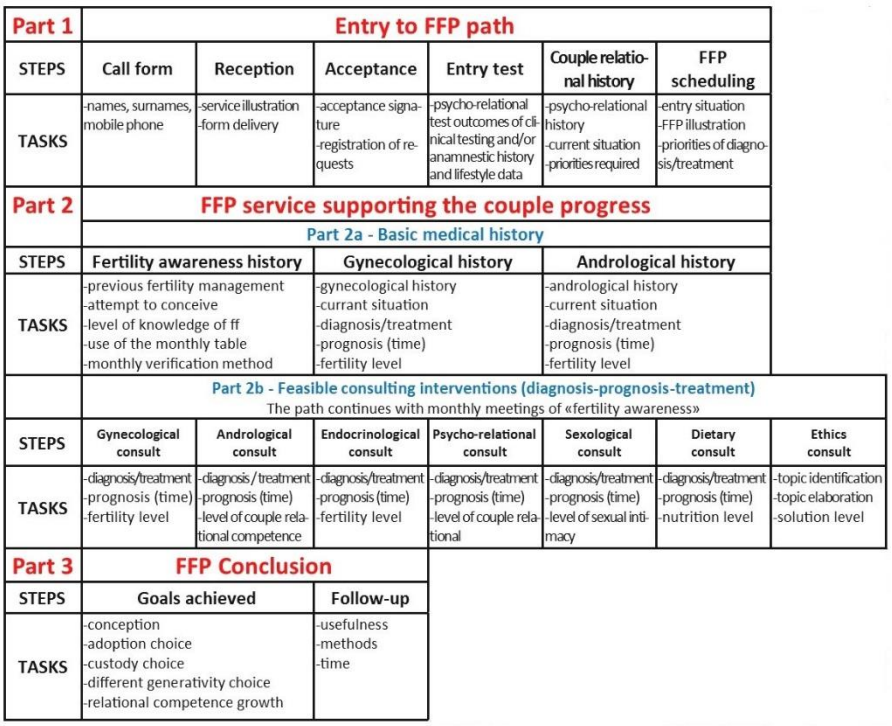
route, for others to express their generativity in a community, social or professional context. The inspiring paradigm is therefore an integral ecology in the field of human fertility (Cavasin & De Conto, 2019).

Secondly, a specific service protocol was developed concerning the duties of the CCM – and, by implication, also for couples and for the professional team – divided into the three phases already indicated. (Fig. 2).

The reception phase concerns correct information regarding the objectives and methods, and subsequently, the collection of initial clinical, psycho-relational and contextual data, as well as the priorities regarding the specialist interventions perceived by the couple as useful or necessary. In this way, a mutual commitment and collaboration between the team and the couple can be established.

Figure 2.

Illustration of FFP to begin planning the assistance



Part 1	Entry to FFP path					
STEPS	Call form	Reception	Acceptance	Entry test	Couple relational history	FFP scheduling
TASKS	-names, surnames, mobile phone	-service illustration -form delivery	-acceptance signature -registration of requests	-psycho-relational test outcomes of clinical testing and/or anamnestic history and lifestyle data	-psycho-relational history -current situation -priorities required	-entry situation -FFP illustration -priorities of diagnosis/treatment
Part 2	FFP service supporting the couple progress					
	Part 2a - Basic medical history					
STEPS	Fertility awareness history		Gynecological history		Andrological history	
TASKS	-previous fertility management -attempt to conceive -level of knowledge of ff -use of the monthly table -monthly verification method		-gynecological history -currant situation -diagnosis/treatment -prognosis (time) -fertility level		-andrological history -current situation -diagnosis/treatment -prognosis (time) -fertility level	
	Part 2b - Feasible consulting interventions (diagnosis-prognosis-treatment) The path continues with monthly meetings of «fertility awareness»					
STEPS	Gynecological consult	Andrological consult	Endocrinological consult	Psycho-relational consult	Sexological consult	Dietary consult	Ethics consult
TASKS	-diagnosis/treatment -prognosis (time) -fertility level	-diagnosis / treatment -prognosis (time) -level of couple relational competence	-diagnosis/treatment -prognosis (time) -fertility level	-diagnosis/treatment -prognosis (time) -level of couple relational	-diagnosis/treatment -prognosis (time) -level of sexual intimacy	-diagnosis/treatment -prognosis (time) -nutrition level	-topic identification -topic elaboration -solution level
Part 3	FFP Conclusion						
STEPS	Goals achieved		Follow-up				
TASKS	-conception -adoption choice -custody choice -different generativity choice -relational competence growth		-usefulness -methods -time				

The planning session marks the start of the path based on the monthly monitoring of fertility awareness, with any diagnostic investigations and consequent treatment interventions suggested as useful.

As a fertility awareness counselor, the CCM has the task, as care manager, of supporting the couple, progressively checking changes and paying attention to the quality of their relationship, which alone can justify the required commitment. At the same time, the CCM has a second task, as case manager: to activate the intervention of the required professionals, shortening any excessive waiting times for appointments, and guaranteeing synergy and dialogue among the members of the team.

The primary aim of the conclusion of the FFP, as already mentioned, is conception: an outcome that can happen as soon as the program has started, or after several monthly cycles. If a treatment for overcoming negative gynecological or andrological factors emerges as appropriate, the time required for diagnosis and therapy ranges from approximately six months to a year. For this reason, the team offers the couple the opportunity to be accompanied for up to 30 cycles.

The primary goal is important and is the objective of the path. However, there may be other goals, which may be defined as secondary, but are no less relevant. For example, a couple, based on the progress made along the FFP, might indicate its decision to move towards a different way of parenting. The CCM acknowledges this orientation and invites couples to make this choice of objective together. For the service, there is an open question regarding whether the support provided – for now focused on conception – should identify the form of parenthood that corresponds best to the couple's vital resources. Otherwise, the couple may decide to move towards MAP. Regarding these guidelines, the CCM acknowledges their communication and invites an explanation of their reasons and an assessment of their consistency and psycho-relational implications (Rooney & Domar, 2018).

Conversely, drop-out can occur, when the couple is no longer motivated to continue the FFP, and psycho-relational or other difficulties may thus emerge. The CCM acknowledges their difficulties and checks whether they are temporary or substantial. If their difficulties are overcome, the couple may remain on the FFP, receiving help from the psychotherapist or other professionals. In any case, it is appropriate to take stock of the path they have taken, to focus on the scope of the generative dimension in the context of their relational intimacy.

Finally, the attention of the scientific committee and the work team was placed on collecting information on the variables that, for various reasons, come into the FFP process, by creating a data archive – obviously with careful observance of the privacy legislation – as reliable documentation to monitor

the development of the service. This task is complex, because the service operates with a multi-disciplinary team, and its members are called upon to integrate their interventions with respect for each other and for the couple. The identification and processing of some variables influencing the results have enabled the design a monthly computerized monitoring system that will soon be available for every member of the team to use[3].

Analysis of initial output

From 3/11/2017 to 30/12/2020, request for access to the service concerned 82 couples, with an average age of 37 for males and 36 for females (Tab. 1).

Table 1. *Access of couples to the service by year*

Year:	N.
2017	11
2018	15
2019	27
2020	29
Total:	**82**

The trend of access over this period indicates a growing development of the service, which could have been greater if the Covid 19 pandemic had not exploded. Access does not always mean activation of the path, as specified in Table 2.

Table 2. *Requests from couples accessing the FFP from 11/3/2017 to 12/30/2020*

	N.	%
Access limited to a request for information	14	17
Access limited to reception	12	15
FFP concluded (with various outcomes)	37	45
FFP in progress	19	23
Total	**82**	**100**

Almost 70% of the couples agreed to join the FFP. This figure suggests

[3] The service team is developing the monthly monitoring of the path based on 7 variables: fertility (Female), fertility (Male), fertility awareness (Couple), relationship competence (Couple), emotional intimacy (Couple), sexual intimacy (Couple), life satisfaction (Couple).

the reception phase is satisfactory as planned, both as a process and regarding the quality of the interpersonal relationship established between couples and the CCM. The number of couples who only request information (17%) underlines the importance of identifying suitable forms of awareness; couples who stop at the reception stage (13%) may be an indication of respect for the couple's freedom by the FFP team, but this number can also be reduced with better synergy between the operators on the team. Understandably, the conclusion has different outcomes, as reported in Table 3.

Table 3. *FFP outcomes based on the objectives of the program*

Objectives of the program	No. of couples	%
A. Primary objective: conception	16	43
B. Secondary objective: orientation towards foster care / adoption / social parenting	9	24
C. Basic objective: strengthening of relational competence *	10	27
D. Objective not achieved: drop-out	2	5
Totale	**37**	100

* Present in each couple's FFP as a "base target"

Upon log-linear analysis of the data of the four goals, objective A is significantly positive (2.63 *) and D negative (-2.35 *). The 43% pregnancy rate – goal A in the period considered – can be compared with the data found in literature. Frank-Hermann's (2019) research on 187 women with fertility treatment – specifically with "fertility awareness learning" – gave a 31% pregnancy outcome. A study on the results of the 2013 activity with 271 couples treated for infertility by the multi-disciplinary clinic – International Scientific Institute for the Study of Infertility, Rome – gave a 42.1% pregnancy outcome (Pompa et al., 2019). According to the 2017 report of the Ministry of Health to Parliament, the success of MAP is equal to 14.2% for the fresh techniques and 21.2% for the techniques involving the thawing of embryos and oocytes. Therefore, this comparison confirms a very positive result for the FFP service, although there is room for improvement.

The purpose of the path goes beyond the primary objective, as indicated in the initial project. It is positive that some couples (9) open up to non-biological parenting (B) by accepting a process of maturing that is not simple, and that they have been helped to focus on the fundamental FFP objective of strengthening their relational competence, i.e. agreed and mutual balance of "agency power" and "communal power", using the fundamental concepts of relational competence theory (L'Abate, 2013) on which the psycho-relational variables of the FFP monitoring are based. To justify the number of couples (10) included in this specific objective (C), it must be considered that the service began with operators welcoming couples directly requesting support to overcome psycho-relational difficulties support and some also seeking to learn about fertility awareness.

These results acquire further depth and value if considered in the light of the debate that has been present in the media in recent months with the expression "how to overcome the gap between desire and decision", regarding the birth rate emergency. In the FFP service, a double gap appears between desire and decision and between decision and conception. The reason for this double gap comes from further data, summarized in three tables. The first (Table 4) concerns the management of sexuality before the decision to try for a child on the part of the couples who contact the service[4].

Table 4. *Sexuality management before the decision to try for a child.*

	No method	Condom	Pill	Fertility awareness	Other	**Total**
N.	8	10	7	2	5	**34**
%	24	30	22	6	15	**100**

The percentages reported are in line with those of the Istat 2013 research on women aged 18-49, except for the item "no method" (Istat research 33%); this 9-point difference indicates greater control over fertility management, i.e., a larger gap between desire and decision (Istat, 2019). In these couples, subsequently found to be sub fertile or infertile, in the first phase of married life or cohabitation, the desire for a child clearly appears to have been postponed, and there are probably several reasons for this postponement. Weak desire at the beginning of their relationship may also be a reason.

The next table (Tab. 5) concerns the period, expressed in months, in which the couples had been trying for a child, prior to reception.

[4] (a) no method 33%, (b) condom 31%; (c) pill 21%, (d) natural methods 5%, (e) other 17%.

Table 5. *Period of seeking conception prior to reception.*

Months trying for a child	No.	%
≤12	7	19
13-24	13	35
25-36	6	16
37-48	4	11
49-60	4	11
≥61	3	8
Total	34	100

For half of the couples, their attempts range from two to three years, a fifth have lasted five and more years, while the average is about 29 months. The log-linear analysis indicates the 13–24-month range as significantly positive (2.78*) compared to the others. Here appears the second gap, with all the implications for the well-being of the couples, who are usually suffering from stress: 70% of couples in the reception phase have an average stress level for infertility, equal to 5 (high) on a 6-point scale; the remaining 30% concerns couples in which the partners' stress levels are different.

Finally, Table 6 shows the priorities in the request for professionals expressed in the reception phase by couples who have completed the FFP (37).

Table 6. *At the reception stage, specialists requested by the couples, in order of priority*

1. care manager	1
2. gynecologist	7
3. andrologist	37
4. sexologist	59
5. psychologist	63
6. ethics consultant	81
7. endocrinologist	89
8. dietician	96

The couple were asked to indicate the specialists they felt they needed to consult, specifying the priority (no couple indicated more than 4 operators). The scores obtained were placed on a scale from 1 to 100: in first place is the care manager; in 7th the gynecologist, in 37th the andrologist, in 59th the sexologist, in 63rd the psychologist, and the others follow. Even bearing in mind that the couples had previously met the care manager (thus establishing a relationship of trust), the meaning of this scale of priority is clear: they feel the need to be "taken care of" and accompanied, but also to play a role on their own path. This need emerges in couples who had already experienced MAP.

These analyses are strengthened with the reflection summarized in the expression "overcoming the gap between desire, decision, and conception" used in the title and taken from the words used by Alessandro Rosina at the Webinar of the Center for Research and Studies of Procreative Health, Sacred Heart University, Rome, held on October 20, 2020: "Always later, always less and less: the challenge of the birth rate in Italy". A full professor of demography and social statistics, Rosina studies demographic transformations, and has many scientific and popular publications to his name on issues related to birth rate (Rosina, 2020)[5].

The FFP service operates on a double "birth rate gap", regarding the second aspect (decision vs conception): it is intimate rather than social relationships that identify the variables according to which the care process must be directed, testing and supporting the decision towards the goal of conception, obviously with an awareness of the time constraints and alternative approaches to parenting.

Table 7. *Women: (A) by age group when they began the FFP, (B) concluded the FFP, (C) conceived (from 1st to 4th.*

A	**B**		**C**	
Age groups*	No. with FFP concluded		N of conceptions	
≥ 40	11	30%	2	13%
35-39	10	27%	3	19%
30-34	10	27%	7	44%
25-29	6	16%	4	25%
Total	**37**	**100%**	**16**	**100%**

* Average age 33 years

Over half of the women with FFP access (21 out of 37) are ≥ 35 years old and only five of them achieved conception. Four out of 6 women under 30 years (out of a total of 15) achieved conception. Istat (2017) reports fertility levels[6] that are not directly comparable with individual FFPs, but they confirm

[5] In the second passage, he refers to the object of the demographic surveys: the desire for fertility in women is for around two children (or even more) while the birth rate per woman is currently 1.3. Therefore, this gap can be reduced by a deliberate and conscious choice. The next step, of a political nature, indicates that this reduction is possible - as is happening in several European countries - if a cultural and social policy change in our mature advanced society takes place that supports the "family quotient" as a common asset, obviously maintaining the commitment over time. The Family Act recently approved by parliament appears to go in this direction.

[6] Age range 25-29: 85%; age range 30-34: 55%; age range 35-39: 20%; age range ≥ 40: 6%

the obvious – that fertility depends on age – and it must be considered that this is a group of sub fertile / infertile couples.

Discussion

The FFP service certainly does not claim to solve and overcome the emergency of the low birth rate, nor does it underestimate the urgency of family policies requiring courageous choices for the development of the country, which Rosina believes must be "systemic" to be effective (and therefore long-term).

The FFP is something of a niche effort, almost an "experiential laboratory" for understanding relational processes, for developing operational strategies and above all for verifying the positive impact of a lifestyle that manages to make the plans of a couple compatible with those of a family, couple satisfaction compatible with parental satisfaction. However, the results contribute to increasing the birth rate. The percentage of infertile couples compared to the total number of couples of childbearing ages is minimal, but not insignificant, when literature considers the percentage of "unexplained infertility" on a medical level to be around 15% (Marana, 2021). To this must be added the percentage of couples that are able to conceive with appropriate medical examinations and care, thanks to the concerted efforts of a multi-disciplinary team. 41% positive results were reported for the ISI outpatient service in 2013. On a conceptual basis and based on the data analysis concerning the start-up period, the FFP proves a good basis for being a useful, reliable offer for many infertile or sub fertile couples.

The service activity particularly emphasizes the central role of the care manager. Let us make some considerations regarding the CCM, as a privileged witness who worked on the gaps between desire, decision, and conception, which can be bridged – or at least reduced and addressed – by "taking care of the many relevant aspects of systemic relationships". They directly concern infertile couples seeking to overcome their problems (Rooney & Domar, 2018), but they are valid for every couple in making aware, informed generative choices (Skvirsky & TauBman, 2019):

As an absolute priority, the couple requires a welcoming environment and relational support, but also needs to be accompanied in the re-appropriation of their corporeality. When the couple is faced with an inability to conceive, they usually enter a crisis that takes its toll on both and on their relationship. The experiences characterizing this phase are sense of guilt, increased anxiety, sense of frustration, loss of self-esteem, sense of inadequacy. Infertility enters the intimate sphere of the couple and can undermine male and female identity: for men, the idea of virility and the knowledge of their reproductive inability undermines sexual performance, while women are denied the experience of motherhood. This is a sensitive issue, so on the one hand, if a child is not born to the couple, friends and relatives do not know how to behave and end up either asking questions – which are sometimes inappropriate –

or avoiding the issue. The couple often isolate: sometimes they both feel hurt by questions experienced as intrusive regarding their intimacy; in other cases, the question of children becomes a taboo subject. So, they try to seek information to solve the problem, first by browsing the internet, then by contacting their general practitioner who, as a rule, sends them directly to the centers for MAP surgery.

The role of "case manager" should also not be overlooked:

The FFP simultaneously enhances the central role of the couple and the professional quality of the team's operators. It is an innovative approach to a generative perspective. Concretely, this service truly takes care of the couples requesting personalized accompaniment, through the different professional figures able to offer reassurance. The team's operators will be able to improve their integration, to the benefit of the couples asking for help.

Even for the team operators, the multidisciplinary perspective is a challenge to be risen to and overcome, accepting, of course, that some effort will be required.

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Conflict of interest

Each author declares that he has no commercial associations (e.g., consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the paper submitted.

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