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# How can you engage yourself in following a healthy lifestyle? A qualitative study in older citizens

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**Abstract**

*Objectives*: In this qualitative study, we provide an in-depth understanding of older people's experiences concerning their engagement in healthy aging lifestyles and of the psychosocial and contextual levers that may impact on this process.

*Methods*: Data were collected through 25 in-depth interviews and were analysed using thematic analysis.

*Results*: Participants described three experiential positions of engagement in healthy aging lifestyles (i.e., "locked position"; "awakening position"; "climbing position"), ranging from a passive and detached to a more active and involved approach. Along this continuum of engagement, specific features, needs, and expectations that may play a role in improving engagement in healthy aging lifestyles among older persons were retrievable.

*Conclusions*: The results of the present study casted light on the multifaceted nature of engagement in healthy aging lifestyles as experienced by older adults, and guided the development and delivery of future health promotion initiatives dedicated to the older population.

Keywords:

health engagement, healthy aging, health promotion, older people, qualitative research

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**Strengths and limitations of this study**

- To the best of our knowledge, this is the first qualitative study investigating older citizens' experiences, motivations and attitudes towards healthy aging lifestyles
- In-depth qualitative interviews were undertaken with the aim of collecting the culturally based experiences of older citizens
- These qualitative evidences may help with the formation of policies grounded on citizens' experiences to increase older people's engagement with health promotion initiatives
- Limitations of our study concern the limited, local and selected sample size

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## Introduction

Worldwide societies are facing an increasingly aging population because of the rapid decline in mortality in the past few decades due to scientific and technological progress [1]. In Italy, life expectancy has increased by 2 years in the last 10 years; however, people actually live the last third of their lives facing with almost one chronic condition [2]. The rapid growth of the aging population poses important challenges, specifically those related to the health of older people [3]. Most societies need to promote healthy behaviours, prevent diseases, and develop effective and ecological low-cost strategies to effectively manage the healthcare burdens due to the aging of population [4]. Promoting healthy lifestyles is challenging, and sustaining the development of healthier habits would reduce older people's risk of contracting chronic diseases. Since older adults differ from younger cohorts in important ways in terms of their health status, living situation, wellbeing, and educational level [5], investigation of the process of engagement in healthy conducts among older adults is likely to be useful when considering such differences. In particular, older people who are less than 75 years old appear to be the best target group for health promotion initiatives. In western societies, they are in most cases still fit, active, and able to care for themselves; thus improving healthy habits in this subgroup of older citizens may not only be more doable, but also prevent negative clinical situations [6].

Following the call for global actions to promote healthy aging [3], many countries have developed healthy aging policies and initiatives [7], that are likely to “optimise opportunities for good health” [8], so that older people can take an active part in their health management and enjoy an independent and high quality of life [9,10]. However, many gaps remain unsolved. Literature shows a lack of consensus on how to improve healthy lifestyles among older citizens [11,12]. Therefore, no efforts have been found to be effective in globally promoting and maintaining the process of healthy aging and no studies have been directly concerned with a more holistic process able to truly and continuously engage older citizens in health prevention and healthy lifestyles [13].

Furthermore, only few studies gave voice to older citizens to explore their active aging experience



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and to understand the psychosocial determinants that may sustain or hinder their engagement in health promotion [14,15].

The goal of the present study is to provide an in-depth understanding of older citizens experiences, motivations and attitudes towards health promotion and healthy lifestyles. The study also aims to provide insights on the psychosocial elements that – from older citizens perspective – may favour their engagement in healthy aging lifestyles. On the basis of these premises, the aims of the study were two folds:

- To deepen the subjective experience of older citizens concerning their engagement in healthy lifestyles
- To explore the psychosocial and contextual levers which may hinder (or foster) their engagement in healthy aging lifestyles

Following the recent activities of European Union on aging [16], we aspire to provide the knowledge base for the promotion of appropriate strategies and interventions to enhance older citizens' engagement in healthy aging and improve their life conditions.

**Method**

Data collection and procedure

A qualitative study using in-depth interviewees was conducted to explore older citizens experiences, attitudes, perspectives, and motivations in relation to their engagement in healthy aging lifestyles. To include the perspectives of older adults, we worked collaboratively with each participant and engaged participants throughout the entire research process to create culturally based data and establish trust with participants [17].

Interviews posed broad and research-driven questions to collect data about the meanings and representations of healthy living, concrete daily habits, engagement in healthy lifestyles, and



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situations that foster or obstruct active engagement in healthy aging conducts (see Table 1 for details). Additional questions were asked, when needed, to elicit further details. Questions posed by researchers were broad and open-ended to elicit narratives from the participants and collect all possible statements, opinions, and experiences the respondents could make about the subject at hand.

Each interview was completed in the individual's home or at participants' place of preference. The interviews ranged from 40 to 90 minutes in duration, with an average duration of 60 minutes.

Table 1 Interviews' guide

| Area | Questions |
| --- | --- |
| **Meanings and representations of health and health management** | 1. *Let's introduce what health means to you… let's tell some images, smell, sound, colour or feeling that you connect with health…elements can be real or fantasy based as far as they represent your experience*<br>2. *What does managing health means to you?* |
| **Concrete daily actions to manage health and disease management experiences** | 3. *Could you describe me your lifestyle in the last week?*<br>4. *How do you manage health daily?*<br>5. *Could you describe an experience of disease management? What happened and what have you done? Why? Who were the actors? Have you involved someone? When* |



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| | *you healed, you managed health in the same way?* |
| **Feelings, thoughts, behaviors when thinking at managing health** | 6. *What are your feelings and thoughts when you reflect on how are you managing health? What can you do to improve your health management?* |
| **Perspectives and experiences of engagement in healthy ageing lifestyles** | 7. *Why in your opinion people is differently engaged in their health management? What do you think about your engagement in healthy lifestyles?* |
| **Suggestions about situations and levers able to foster or obstruct the process of engagement in healthy ageing lifestyles** | 8. *Do you think that is possible to become more or less engaged in managing health? How? Could you describe me some situation or event that changed your engagement?* 9. *What would help you in being more engaged in managing your health?* |

Participants

A purposive sample of 25 north-Italian older adults was sequentially recruited to take part in the study. The inclusion criteria were:

(i) being 64-75 years of age (this range was selected because people who are younger than 75 years



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of age may particularly benefit from engaging in health promoting behaviours in terms of prevention of future health problems; furthermore this target population is more likely to engage in health promotion initiatives compared to individuals older than 75 years of age);

(ii) not having mental health problems that could invalidate data;

(iii) being able to understand and speak Italian;

(iv) having a medium-high level of education (completed schooling up to grade 3) (participants were asked to express themselves with well-articulated stories and to enact deep reflexive process on their stories, which generally implies to involve participants with high mental and educational resources);

(v) being willing to participate in the study.

Older participants with serious and relapsing health conditions and those following a prescribed medical treatment were excluded. We wanted to focus on the analysis of health promotion experiences and preventive behaviours, rather than on people's adherence to medical care. Thus, according to the qualitative strategy of theoretical sampling [18], we purposively selected older citizens without an invalidating diagnosis, since our goal was to understand older people's ways of engaging in healthy conducts in the usual daily life rather than exploring patients' engagement in care management. Potential participants were recruited through several means. Some citizens were recruited through different senior aggregative centres. Others were recruited using a snowball sampling technique [19] based on recommendations from individuals likely to be interested in the study.

Thirteen females and 12 males who met the inclusion criteria were included in the study. Most participants lived predominantly in Lombardy (68 per cent) and in villages or small towns of suburban areas (60 per cent) while only 7 lived in Liguria (28 per cent). The age ranged from 64 to 75 years of age (mean age of 67.8 years). The sample comprised primarily retired participants. Overall, 23 participants resided with a family member (in most cases with their spouse/partner) and 7 of them lived with two or more family members (generally the husband/wife and adult children).



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Two older adult participants lived alone but near a family member. For further details, see Table 2.

Table 2 Overview of the composition of the sample

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| Gender: female/ male, *n (%)* | 13/12 (52/48) |
| Age: years, media | 64-75 (67,8) |
| Married/ not married, *n (%)* | 23/2 (92/8) |
| Worker/ not worker, *n (%)* | 8/17 (32/68) |
| Domicile: Lombardia/ Liguria, *n (%)* | 17/8 (68/32) |
| Geographic location: urban/suburban/rural, *n (%)* | 7/15/3 (28/60/12) |

Data analysis

All interviews were transcribed verbatim and analysed through a thematic analysis with an inductive approach [20]. Two researchers analysed and coded the transcripts independently to identify thematic patterns as resulting from older participants' experiences of engagement in healthy lifestyles. Thereafter, categories and themes describing older citizens' engagement in healthy lifestyles and those ones compelling barriers/facilitators to this were detected [21]. Finally, in a joint meeting, the researchers discussed and reached an agreement on a list of categories and themes that resulted from data to describe different approaches of engagement in healthy aging lifestyles. When disagreement emerged, the researchers reached a consensus through discussion. Following this analytical step, the researchers built a conceptual framework summarizing the results of the interviews.

The results are reviewed below and include some quotes extracted from interviews to support our results. The quotes selected for this article were translated into English by the researchers involved in the data collection and analysis together with the assistance of an Italian and English speaking



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translator [22]. Finally, a professional native English translator corrected and checked translations [22]. Original quotes are available upon request.

Ethical concerns

The Catholic University of Milan Ethics Review Board approved the study. Each participant consented to participate in the study (including audiotaping and transcription of the interviews) prior to participating.

## Findings

Interviews revealed different experiences of engagement in healthy lifestyles among the older citizens interviewed, that range in a psychosocial continuum, from a passive and detached to a more active and involved approach to health promotion. Along this continuum of engagement, specific features, needs, and expectations that may play a role in improving engagement in healthy aging lifestyles among older persons are retrievable. Particularly, the analysis casted light on three experiential positions of engagement in healthy aging lifestyles (i.e., "locked position"; "awakening position"; "climbing position") (see Figure 1). In line with the study aims, the findings for every position are presented in two parts. First, the representations and experiences that study participants attributed to the position of engagement are presented. Thereafter, the needs and possible experiential levers able to engage in healthy aging conducts from older people perspective are reported. We summarize those insights below.

< Insert Figure 1 about here >

### First position: "I feel locked"

Among interviewees, some participants described themselves as blocked, namely frozen in their



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unhealthy lifestyles and habits. Most of them were not working and lacked social network. Emotional resignation, lack of purpose, unhealthy behaviours (i.e., cigarettes, alcohol abuse), and social isolation were commonly reported by these interviewees. Older participants often attributed the lack of healthy behaviours to a general lack of self-care and life purposes and used negative emotional words when referring to their relationship with health. A similar approach to health was reported by participants who felt lack of love and self-acceptance, which often characterized their entire life but was exacerbated by aging-related issues (e.g., retirement, death of loved ones, loss of a social role, menopause). Generally, these participants said that thinking about different ways to manage their health during aging was scary and anxiety provoking; thus, they preferred to "continue life as usual", avoiding negative emotions and frightening thoughts that would emerge if they included health in own daily projects. Thus, they felt "locked" in an unhappy last part of life, wishing to be saved but feeling unable to save themselves.

*after all my life is ok for me, so I do absolutely nothing to change it...I'm fine by myself as well, so I don't really look for particular situations to increase what I should do to feel better..*

(int. 20, M, 64 years old)

*I have an identity issue in organizing my health, I get anxious to thinking about it and I prefer to continue my life as usual.*

(int. 18, F, 64 years old)

Furthermore, the participants reported that their health practices were inextricably linked to their religious beliefs. Interviews suggested that religious beliefs about health and/or illness shape health representations and behaviours. Indeed, these participants described themselves as delegating their health status to others. Although this helped them avoid negative emotions, these interviewees were also aware of the fact that these beliefs contributed to reduce their health management actions. Consequently, they reported a fatalistic attitude with feelings of resignation and dissatisfaction with



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life. These feelings also influenced their approach to risk prevention and health management. Since the participants reported that the emergence of diseases could not be controlled, they felt that it would be useless to follow healthy lifestyles to prevent diseases.

*It is useless to worry about what may happen and what can be done to prevent mishaps…cancer or other diseases can occur also if you have an optimal lifestyle…*

(int. 25, M, 68 years old)

***Needs and levers to engage "locked" older citizens in healthy aging lifestyles***

Since the missing approach to healthy living was described in emotional terms and was characterized by resignation, lack of purpose, worries, and fears of losing autonomy or remaining alone, participants reported specific needs to manage those negative emotions, build social relationships, and foster a more positive attitude towards themselves. In this sense, older participants reported that they would need something able to " *upsets them*", "*awakening*" them from the numbness of their disengagement in health and prevention. Furthermore they claimed for sources of more positive feelings and hope towards their future life trajectories.

*I absolutely do not follow prevention, but if any serious illness came, I would be forced to change to regain my health*

(int.1, M, 64 years old)

*You can change in the event that a disease hits you, so you become scared, so your lifestyle changes*

(int. 20, M, 64 years old)

*I stopped smoking thanks to a book that made me aware that depending on cigarettes made me miserable and that convinced me that having fun would help me*

(int.16, M, 73 years old)



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**Second position: "I'm awakening"**

Some other participants, mostly with a good but superficial social network, seesawed in managing health between a health awareness ward and a lack of motivation in improving their health during aging, with the general adoption of a healthy lifestyle not aware of risks due to aging. Unlike the "locked position", in the "awakening position", participants alternated between a fatalistic and a more active attitude toward health and life; some situations were perceived under their control while others were not. This is the case of participants who manage their health when they are sick but when they are healthy, they lack motivation and perceive loss of control over their physical health.

*Obviously, I take care of my health when I'm sick to heal! But when I heal I do nothing to stay healthy: It's useless, it's not under your control!*

(int. 10, F, 64 years old)

As participants stated, although they were aware of the importance of engaging in healthy conducts, involving in physical activities, eating better, and planning meaningful activities to feel healthier, they preferred to leave health out of daily plans. Thus, they described themselves as aware but often inactive in managing health, that is, by defining themselves in an "awakening" status. They understood the importance of engaging in healthy behaviours at the "theoretical level", but in the practice, they mostly failed to translate this knowledge into concrete health promotion and preventive behaviours. Furthermore these participants often failed to recognize their actual need to "do more" to improve their lifestyle, particularly due to fact that aging requires a greater attention to physical limits and to a global self-care. Focusing on prevention and modifying their lifestyles according to the limitations and barriers that emerge during the process of aging were perceived as strictly connected to the acceptance of growing old, thus to the experiences with aging. Finally, these participants manifested a sort of emotive ambivalence towards their aging process. On the one



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hand, their feelings of guilt for doing the bare minimum and, on the other hand, their desire to avoid being concerned with health increased the disconnect between actions and thoughts.

*I know that I should do sport, in the past I used to go to the gym but in the recent years, I finally chose the oratory and not the gym, whereas I know that this is not the better choice for me*

(int. 23, F, 68 years old)

***Needs and levers to engage "awakening" older citizens in healthy aging lifestyles***

Participants in this position knew that they should do more to improve their health, but they failed to translate this knowledge in concrete behaviours due to the emotional ambivalence they felt towards the aging process. Considering the emotional conflict between the cognitive level of health awareness and minimum healthy behaviours, social relationships were conceived as useful in fostering a more active health engagement.

*Doing something with someone could help to be more active*

(int. 18, F, 64 years old)

*It is likely to happen that having relations with other people would help me be involved in activities...you don't run or play tennis or something else alone...but maybe with someone...*

(int. 20, M, 64 years old)

Moreover, participants recognized the behavioural level as the more accessible way to foster a greater integration between actions and thoughts. Participants reported that planning daily habits, setting goals, using technologies, and activating social network are all useful strategies for improving healthy aging actions.

*Setting my own goals for the future and getting busy with daily commitment lead me to feel better...*



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*for example gardening or spending my time out, I'm sure that will bring benefit to my mind*

(int. 24, M, 64 years old)

Participants believed that planned and shared strategies could foster their engagement in healthier lifestyles. This is also the case of bad habits, which were reported by participants on a daily basis. Participants were aware of these habits but were unable to control them or unwilling to sacrifice them. Controlling those habits by planning them was perceived as useful for becoming more engaged in healthy lifestyles. Interestingly, some participants in this position expressed that technologies - especially if easy to use - may be particularly useful for planning healthy behaviours and connecting with other members of community with whom they could share health practices.

**Third position: "I'm aware that I'm climbing"**

Participants in this experiential position reported a better integrated management approach to their health. They described their lifestyle in terms of being constantly aware of the importance of taking care of the self to remain healthy as long as possible and to feel good physically, mentally, and socially. Participants made sense of their life, and they elaborated and accepted that they are close to death, which allows them to live fully every day. They were conscious that the physical health influences well-being in all the other spheres of human existence and that taking care of one-self increases wellness and happiness and foster one-own sense of control over life trajectories. Thus, a strong sense of coherence, control, and self-efficacy, as well as a greater motivation to feel aware and reflexive emerged from the interviews as crucial to be engaged in healthy aging lifestyles. In this sense, this position was defined as "*climbing*" because of the constant efforts made by participants to master their entire health status and wellbeing.

*As I do something, I think about the consequence of what I'm doing to prevent diseases and how I'm feeling*



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(int. 3, M, 75 years old)

*At a certain age, you have to start thinking about your health and yourself, sooner or later something happens … there is an exponential curve between age and health, and I'm at the point in which something will happen…so I'm aware that I want to live the last years fully and peacefully!*

(int. 22, M, 75 years old)

*Loving and accepting each other is the foundation of everything, it gives you a purpose of life, it makes you feel that it's you at the helm*

(int. 14, M, 73 years old)

***Needs and levers to engage "climbing" older citizens in healthy aging lifestyles***

Participants said that feeling satisfied with what they have done during their lives and giving sense to their lives were important elements of successful acceptance of aging and, therefore, of managing their health. They focused on leaving something in the world to have a sense of life and die peacefully. Death was part of the participants' thoughts, and participants perceived accepting a possible illness and death as a necessary part of life. Indeed, participants reported that they successfully manage critical events (such as the occurrence of health problems or the deaths of friends and relatives) by elaborating their sense within the whole spectrum of their existence and in the light of a positive approach to life. According to participants, being in peace with life, aging, and death foster wellbeing and positive engagement in healthy lifestyle.

*Sooner or later, life ends. It is important to have the satisfaction of having done something, to have done things, to have left something...more than the fear of death, I'd rather end in a particular way*

(int. 22, M, 75 years old)

*The problem is not to avoid diseases but to live with them in a decent way and in line with your life*

(int. 18, F, 64 years old)



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These participants believed that their own actions determine their health. Perceptions of having control over health and life foster, as older participants said, proactive behaviours and a sense of power and agency. Participants in this position described themselves as able to face anxiety related to taking responsibility for their health status, having control over all health dimensions, and strengthening feelings of self-determination.

*This is more a question of head, mental. It's how I feel at this moment and It's more a mental fact to love and accept myself and feel that life is in my hands...of course it takes a little bit of luck*

(int. 15, F, 68 year old)

Relationships also played an active part in the "climbing position", because having an active social role in the community was conceived as a way to have a purpose in life and to be part of something bigger, which can give sense to life and death.

*Sooner or later life ends, it is important to reach the satisfaction of having done something, of having left something, of having made a small contribution to other people...*

(int. 22, M, 75 years-older)

Additionally, participants perceived the use of controlled and limited bad habits (e.g., a glass of wine during special events, eating a sweet during a dinner with friends) in their lifestyles as useful because it allows them to improve their wellbeing. Indeed, participants explained their wellbeing as *"having the possibility to be free, also to exceed bounds sometimes"* (int.5, F, 67 years-older). At the same time, engaging in bad habits occasionally helped them maintaining engagement in a balanced healthy lifestyle, avoiding the risk of becoming too obsessive about healthy behaviours and allowing them to enjoy their old age more fully. These "*exception to the rule*" have an important psychological function to improve the quality of life without scarifying a healthy living



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and preventive practice.

## Discussion

This qualitative study explored older citizens' experiences related to engaging in healthy aging lifestyles, offering insights to guide future health promotion initiatives dedicated to the older population.

The findings revealed different positions of engagement in healthy aging lifestyles within a continuum, where participants with lower levels of engagement experienced social isolation, stagnation, and despair, while those who fully engaged in healthy aging lifestyles reported fulfilment, individual growth, and integrity. The positions of engagement in healthy aging lifestyles proposed by our study are in line with the results of a study which was aimed to investigate the effect of lay perspectives on successful aging to foster personal and community wellbeing [23]. The study, by emphasizing the balance between self-contentment and self-growth in later life, suggested that reaching high levels of health engagement is related to higher levels of self-growth, self-contentment, and individual and social fulfilment. The positions we found are also similar the stages of health promotion change in the Transtheoretical Model [24], which includes precontemplation, contemplation, preparation, action, and maintenance stages. However, the Transtheoretical Model focuses mainly on behavioural and cognitive aspects of the self-management of health, and they do not deal explicitly with emotional issues. Instead, our results showed that individuals' emotional elaboration plays an essential role in how they cope with situation of health, thus influencing their engagement in healthy aging lifestyles. Moreover, our data provide an insight on the complex and challenging emotional nature of older people' engagement trajectories towards their health management. Indeed, interviews revealed specific emotional needs for every positions of engagement in healthy aging lifestyles, that cast lights on the specific scaffolding and elaboration needs that older citizens experience during their aging process. Needs that have to be addressed in

order to sustain a positive sense making process towards aging of older adults and their acceptance of changing identity and role in the society. For instance, participants in a “locked position” reported the protective role of positive emotions on their physical and mental health over time, by confirming evidences from positive psychology literature [25-28]. Those in “awakening position” expressed their emotional conflict between being aware of the importance of assuming healthier conducts and their difficulty in translating this knowledge in concrete preventive behaviours. The last group of older citizens in the “climbing profile” advise that a helpful strategy for maintaining the personal and social balance could be being engaged in exercises of mental and psychological strengthening (e.g., for self-efficacy, self-empowerment, cognitive reinforce, self-worth, and purpose in life). These factors are indeed crucial for "optimising aging well and enhancing the quality of later life, enabling older people to feel confident in living with wider benefits to society" [29]. These results suggest that interventions aimed at promoting healthy aging should adopt specific measures for each position of engagement in healthy aging lifestyles and offer insights about possible actions that can be adopted to promote older citizens engagement lifestyle change. In particular, those actions emphasized the importance of working on positive psychological states (e.g., positive emotions, motivation and goal setting, fulfilment and self-improvement) to allow older people engaging at best in their healthy aging trajectories. Different studies and interventions are to date available confirming the effective value of working on such states to foster health behaviour change [30-34]. Most of these studies considered populations with chronic conditions – thus were mainly aimed to improve medication adherence and disease management – [30, 32-35], and were not specifically targeted towards older samples [30, 32-34]. The few studies settled for an older population were mostly aimed to enhance mental wellbeing and quality of life [27,28,35]. The results of the present study casted light on the multifaceted nature of engagement in healthy aging lifestyles as experienced by older adults, and guided the development and delivery of future health promotion initiatives dedicated to the older population.



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**Study limits and future research**

The findings of this study contribute to cast light on the process of older citizens' engagement in healthy aging lifestyles, by underlining psychosocial factors and levers that may sustain or inhibit such process.

Although promising, the results of this study need to be verified. One limitation of our study concerns the limited sample size. Further studies with larger sample sizes and different demographical features are needed to investigate factors (i.e., demographical, clinical, personality, cultural) that might influence the process of engagement in healthy aging conducts. Similarly, participants resided in northern Italy, and older adults living in other parts of Italy (and in other countries) may have different perceptions and experiences. However, through the analysis of the narratives, only themes that all participants endorsed were extracted to include only the most common beliefs. Finally, the inclusion of participants younger than 75 years of age without chronic health problems at the time of interview may have limited our findings and the ways in which participants conceptualize and engage in healthy aging conducts to a restricted and specific part of population. Furthermore, the choice of including only people with 'medium-high' level of education due to the method requirements may have influenced findings.

We are aware of the limits of the study and for this reason, we are proceeding with a wider quantitative study on a larger sample to test our results, to collect further data about different experiences of engagement in healthy aging conducts, and to detail psychosocial features of each position. Future research should seek to support ecological, feasible, and effective interventions with an aim to foster the developmental process of older people engagement in health management. Similar results would guide the development of interventions that would successfully involve older citizens in healthy aging conducts.

**Conflict of interests**

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The Authors declare that there is no conflict of interest

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**Contributorship statement**

JM conducted interviews and all analyses, wrote the first draft of the manuscript and rewrote new drafts based on input from co-authors. GG designed the research project, planned the analyses and gave input and revision on manuscript drafts. All authors read and approved the final manuscript. DB and AP contributed to support interviews, transcribed them, and helped in analyses.

**Competing interests**

None declared

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All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: all authors had financial support from Catholic University (Faculty of Psychology - Project "D3.2. Crescere da anziani: Attivare risorse per stili di vita sostenibili") for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work. The funder had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

**Data sharing statement**



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Original quotes and audio data of interviews are available upon request from the corresponding author at Catholic University of Milan. Consent for data sharing was not obtained but the presented data are anonymised and risk of identification is low.

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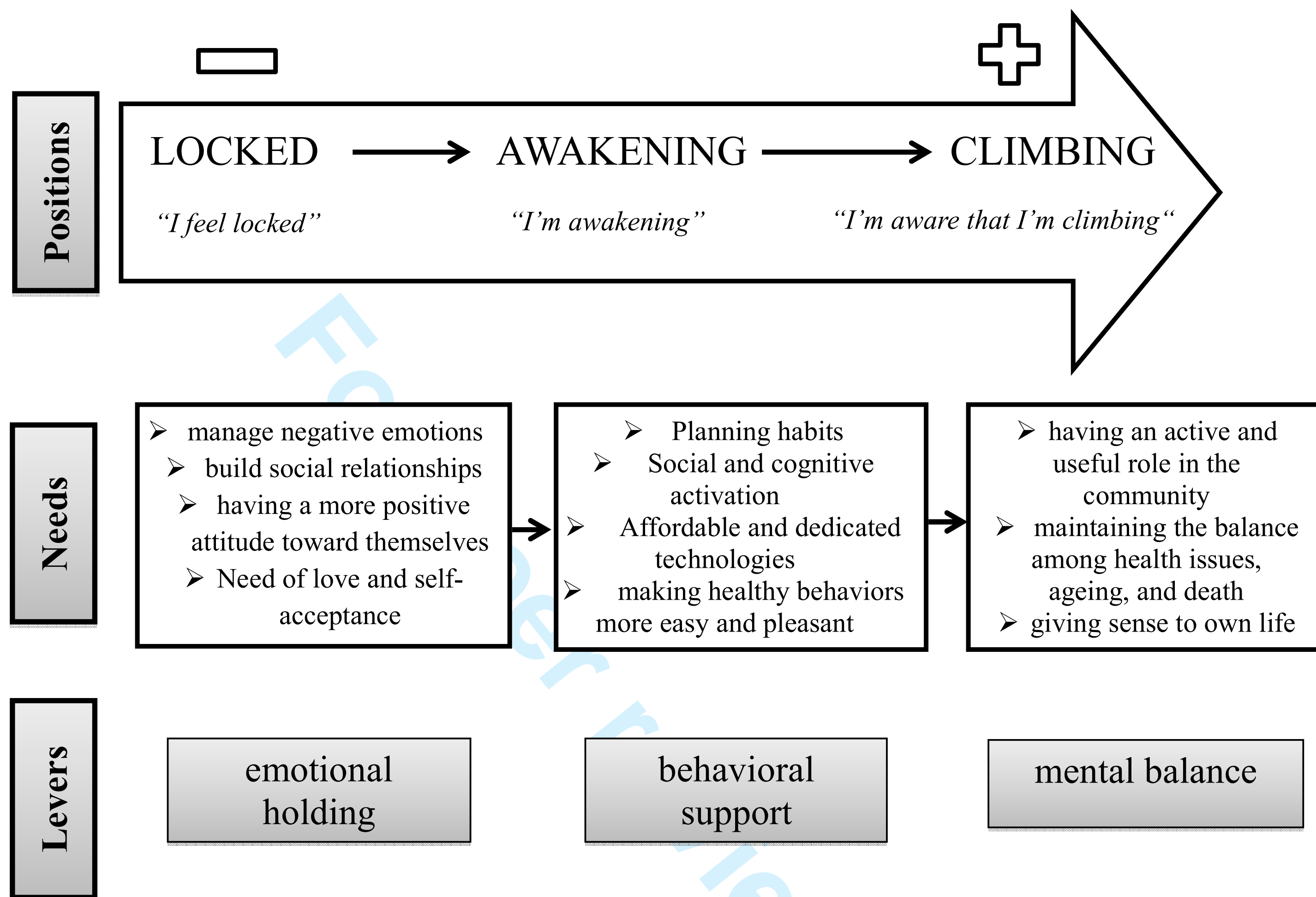
Figure 1 The three positions, needs and levers of engagement in healthy lifestyles

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# How older citizens engage in their health promotion: A qualitative research driven taxonomy of experiences and meanings


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Research Article

# How older citizens engage in their health promotion: A qualitative research driven taxonomy of experiences and meanings

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How older citizens engage in their health promotion: A qualitative research driven taxonomy of experiences and meanings



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**Abstract**

*Objectives*: In this qualitative study, we provide an in-depth exploration of older people's experiences, subjective meanings concerning their engagement in health promotion and the difficulties they face in these experiences both at the emotional and pragmatic level.

*Methods*: The study was designed according to the Ethnoscience method, which implies a participatory process that values patients' linguistic expressions to deeply understand the phenomena under the investigation and to give it a meaning. Using this method, thanks to repeated rounds of interviews and q-sorting task, participants, supported by the researcher, created a sort of dictionary, with the support of researcher, to describe the phenomenon of interest and agreed on a shared taxonomy of meanings and experiences related to the phenomenon. Twenty-five North Italian older citizens participated in this study.

*Results*: Participants described a shared taxonomy of health engagement experiences by depicting three main positions (i.e., "locked position"; "awakening position"; "climbing position"), which represented different experiential domains grouped by participants in four main semantic areas (e.g., physical care, soul care, daily lifestyle, contact with ageing). Each position is characterized by specific emotions, personal representations of meaning and healthy behaviours that may sustain or hinder older citizens engagement in health promotion.

*Conclusions*: The results of the present study suggest the importance of deeply understanding older peoples' experiences and their subjective meanings towards health promotion. Particularly, the results showed how their engagement in health promotion is framed in a complex system of psychological meanings, which may sustain or hinder their ability to adopt healthy behaviours. A deeper understanding of older citizens' lived experiences, their doubts, and their difficulties in engaging in health promotion may offer some important cues for orienting interventions in this area.

Keywords:

health promotion, patient engagement, healthy aging, older people, qualitative research,



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Ethnoscience

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**Strengths and limitations of this study**

- To the best of our knowledge, this is the first qualitative study investigating older citizens' experiences, motivations, and attitudes towards their health promotion
- The Ethnoscience method allowed us to unveil subjective meanings related to older citizens' health promotion experiences
- The Ethnoscience method allowed us to adopt a truly participative process of research, where older citizens collaborated with the researchers in the construction of a shared vocabulary and taxonomy of their health promotion experiences
- These qualitative evidences cast light on subjective meanings and experiences that may sustain or hinder older citizens' engagement in their health promotion
- Our study is limited by a locally selected sample

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## Introduction

Societies worldwide are facing an increasingly aging population because of the rapid decline in mortality in the past few decades due to scientific and technological progress [1]. In Italy, life expectancy has increased by 2 years in the last 10 years; however, people actually live the last third of their lives with at least one chronic condition [2]. The rapid growth of the aging population poses important challenges, specifically those related to the health of older people [3]. Most societies need to promote healthy behaviours, prevent diseases, and develop effective and ecological low-cost strategies to effectively manage healthcare burdens associated with the aging of population [4]. In the literature, different theoretical models have been developed with the aim to promote health behaviour changes in patients/citizens, working on individual, interpersonal, or community level. For example, looking at the individual level, the health belief model, which has been widely adopted, and it recognizes the importance of people's beliefs about health problems, perceived benefits of and barriers to action, cues to action, and self-efficacy in explaining engagement in health-promoting behaviours [5-7]. Differently, the Transtheoretical model conceives behaviour change as a process comprising five levels of readiness to change (i.e., pre-contemplation, contemplation, preparation, action, and maintenance) through which individuals progress to adopt healthy or eliminate unhealthy behaviours [8]. Additionally, the social cognitive theory was adopted at individual and interpersonal level to understand the ways in which personal cognitive factors (e.g., self-efficacy, observational learning, expectations) can represent a third interface between individual and social environment that, if supported, can sustain behaviour change [9]. Similarly, the theory of planned behaviour links beliefs to health behaviours and suggests the ways in which behaviours, subjective norms, and perceived behavioural control, together could shape an individual's behavioural intentions and thus behaviours [10]. Most of these models, however, failed to consider cultural and age-related factors, which are crucial to explain differences in health promoting behaviours [11,12]. Indeed, since older adults differ from younger cohorts in important ways in terms of their health status, living situation, wellbeing, and educational level [13,14],

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investigation of the process of engagement in health promotion among older adults is likely to be useful when considering such differences. Consequently, studies on the determinants that, from an individual perspective, may sustain or hinder the engagement of older citizens in health promotion by giving voice to older citizens experiences are needed [15-17].

The goal of the present study is to provide an in-depth understanding of older citizens' experiences with health promotion, with a particular reference to the subjective meanings and elements that – from older citizens' perspective – may favour or hinder such experiences. Based on these premises, the aims of the study were two-fold:

- To involve older citizens in a participatory research process aimed at drafting a shared taxonomy of meanings and representation related to their health promotion experience
- To deepen factors of older citizens' experiences that may sustain or hinder their engagement in health promotion

Following the recent activities of European Union on aging [18], we aspire to provide the knowledge base for the promotion of appropriate strategies and interventions to enhance older citizens' engagement in health promotion and improve their life conditions by deliberately focusing on a particular age group (older people younger than 75 years old), which could particularly benefit from health promotion initiatives, as they are in most cases still fit, active, and able to care for themselves. Consequently, improving healthy habits in this subgroup of older citizens may not only be more doable, but also prevent negative clinical situations [19]. It is not surprising that most preventive measures and health promotion initiatives focused on this 'younger' age group to stave off health-related problems in the next decades [20,21].

## Method

Design



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A qualitative study designed according to the Ethnoscience method [22] was adopted to involve older citizens in the construction of a common vocabulary and in a shared taxonomy related to their health management experiences. This method assumes the importance of studying language (and the way language is used) to understand implicit meanings related to individual experiences. The linguistic choices made by speakers when describing their health management attitudes and behaviours may indeed uncover the social representations, emotional experiences, and psychological attitudes of people towards their health. This may be particularly meaningful when the phenomenon under the investigation is complex and "abstract" (such as discussing about one owns engagement in health promotion), and interviewees may find it difficult to deeply reflect upon their related experiences. Ethnoscience is based on repeated semi-structured interviews and q-sorting tasks to allow the flexible investigation of the phenomena under investigation and to study the lexical expressions of participants when describing their experiences (see par. Data collection and procedure) [23]. The Q-sorting technique is a general methodology used to gather and process a person's viewpoint as well as to categorize a complex phenomenon [24]. By Q-sorting, people reveal their personal way of categorizing a phenomenon and giving sense to a particular reality [25,26]. In detail, all interviewees were interviewed twice. In the first round, they were required to reflect upon their health promotion experiences following a semi-structured guide of interview and a non-directive moderation style. In the second round of interviews, they were asked to engage in a participative analysis process aimed at drafting a shared vocabulary and taxonomy of health promotion experiences thanks to Q-sort tasks. Particularly, the tasks involved selecting of cards (which reported linguistic extracts from previous interviews) that reflected their health promotion experience, grouping the selected cards, assigning a name to each group, reflecting on the relationships among groups, and providing insights on the factors that are able to foster/obstruct older people's health promotion experiences (see the next paragraph for further details).

Data collection and procedure



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Participants were involved in two sequential rounds of semi-structured interviews. Two researchers conducted the interviews together (JM, DB). Both of them were psychologists trained in qualitative methods.

- The first round of interviews posed broad questions to collect the data on the meanings and representations of health promotion, concrete daily habits, engagement in healthy lifestyles, and situations that foster or obstruct active engagement in health promotion (see Table 1 for details). Additional questions were asked, when needed, to elicit further details. Questions posed by researchers adopting the Ethnoscience method are usually broad and open-ended to elicit narratives from the participants and collect all possible statements, opinions, and experiences from the respondents about the phenomenon under the investigation [27]. All interviews were fully transcribed and selected recurrent linguistic expressions used by interviewees to describe their health promotion experience were reported verbatim on cards: one linguistic expression per each card (see paragraph Data Analysis for further details).
- All interviewees were re-interviewed after the first phase of data analysis to construct a shared taxonomy of their health promotion experiences in collaboration with the researchers. In particular, this second round of interviews implied Q-sorting tasks. The first Q-sorting task asked participants to select the meanings and linguistic expressions reported on the cards that best represented their experience and representation of being engaged in health promotion (i.e., "*please select the cards that mainly represent you*") and to eliminate the cards, which they felt were far from their subjective experience. In the second task, participants were invited to group and categorize the selected cards based on spontaneously agreed upon homogeneity criteria ("*among the cards you selected, can you identify group of cards that can be linked together?*"). This second task allowed the investigation of spontaneous categorization and, thus, of individuals' representational domains. This task formed the basis of the first "taxonomies of meanings" spontaneously created by participants during their interviews ("*How do the groups of cards relate among them? What*



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105 *is the reason of these linkages? What do this emerging taxonomy means to you?*").

106 Each interview was completed in the individual's home or at participants' place of preference. The

107 interviews ranged from 40 to 90 minutes, with an average duration of 60 minutes.

108

109 Table 1 First round of interviews' guide

| Area | Questions |
|---|---|
| **Meanings and representations of health and health promotion** | 1. *Let's introduce what health means to you… let's describe this using your words*<br>2. *What does promoting health means to you?* |
| **Concrete daily actions to promote health** | 3. *Could you describe me your lifestyle in the last week?*<br>4. *How do you manage health daily?*<br>5. *Could you describe a real situation where you promoted your health? What happened and what have you done? Why? Who were the actors? Have you involved someone? When you healed, you managed health in the same way?* |
| **Feelings, thoughts, behaviours when thinking at health promotion** | 6. *What are your feelings and thoughts when you reflect on how you are promoting health? What can you do to improve your health?* |



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| | |
|---|---|
| **Perspectives and experiences of engagement in health promotion** | 7. *In your opinion, why are people differently engaged in their health promotion? What do you think about your engagement in health promotion?*<br>8. *Do you think that is possible to become more or less engaged in health promotion? How? Could you describe me some situation or event that changed your engagement?*<br>9. *What would help you in being more engaged in promoting your health?* |

Participants

A purposive sample of 25 north-Italian older adults was sequentially recruited to participate in the study [28]. Potential participants were recruited through several means. Firstly, citizens were recruited from different senior centres (e.g., community centers, activity centers, recreation associations, community recreation centers), which were contacted by telephone or e-mail and invited to take part in the study. Individuals with the desired characteristics were then asked to recommend similar participants from their social networks, starting a "process analogous to a snowball rolling down a hill" [29,30]. Thus, a snowball sampling technique was adopted [31], which is particularly useful to reach vulnerable or hard-to-reach groups in a more effective, pragmatic, and culturally competent way [29].

The inclusion criteria were:



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(i) being 65-75 years of age (this range was selected because people who are younger than 75 years of age may particularly benefit from engaging in health promoting behaviours in terms of prevention of future health problems; furthermore, this target population is more likely to engage in health promotion initiatives compared to individuals older than 75 years of age);

(ii) being able to express themselves with well-articulated stories and to deeply reflect on their stories (e.g., people with mental health problems or impairing physical conditions were excluded);

(iii) being able to understand and speak Italian;

(iv) being willing to participate in the study.

Data analysis

All interviews were transcribed verbatim and analysed using a thematic analysis with an inductive approach [32]. Two researchers analysed and coded the transcripts independently to identify the key words, phrases, and expressions, which the participants repeatedly used to describe their health promotion experiences. In a joint meeting, the researchers discussed and reached an agreement on a list of selected linguistic expressions. This process resulted in a shared "dictionary" containing words/phrases that were then printed into cards to be used in the second phase of the research process: the Q-sort tasks. These tasks were completed during the second round of interviews. The researchers kept track of card-sorting choices made by each participant during the second round of interviews. Based on spontaneous card sorting and grouping by each participant, researchers were able to draft a taxonomy of meanings and experiences (one for each participant), presenting the results of the card sorts in a table form. In a separate meeting, the researchers compared the taxonomies derived from the card-sort tasks to identify common thematic patterns and to develop a final, inclusive and more synthetic taxonomy of older citizens' health promotion experiences. When disagreement emerged, the researchers reached a consensus through discussion.

The results are reviewed below, and they include some quotes extracted from the interviews to support our results. The researchers involved in the data collection and analysis translated the



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148 quotes selected for this article into English together with the assistance of an Italian and English
149 speaking translator [33]. Finally, a professional native English translator corrected and checked the
150 translations [33]. Original quotes are available upon request.
151
152 Ethical concerns
153 The Catholic University of Milan Ethics Review Board approved the study. Each participant was
154 free to participate and withdraw from the research and was informed about the procedures of the
155 study. All participants consented to participate in the study (including audiotaping and transcription
156 of the interviews) by signing a written consent form. Information that could identify participants
157 was removed, and each interviewee was assigned an identification number to protect his/her
158 anonymity.
159
160 **Findings**
161
162 Thirteen females and 12 males who met the inclusion criteria were included in the study. Most
163 participants lived predominantly in Lombardy (68 per cent) and in villages or small towns of
164 suburban areas (60 per cent) while only 7 lived in Liguria (28 per cent). The age ranged from 65 to
165 75 years of age (mean age of 67.8 years). The sample comprised primarily retired participants.
166 Overall, 23 participants resided with a family member (in most cases with their spouse/partner) and
167 7 of them lived with two or more family members (generally the husband/wife and adult children).
168 Two older adult participants lived alone but near a family member. For further details, see Table 2.
169
170 Table 2 Overview of the composition of the sample

| Features | | n | % |
|---|---|---|---|
| Gender | | | |
| | Female | 13 | 52 |



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| | | | |
|---|---|---|---|
| | Male | 12 | 48 |
| Marital status | | | |
| | Married | 23 | 92 |
| | Not married | 2 | 8 |
| Employment | | | |
| | Worker | 8 | 32 |
| | Not worker | 17 | 68 |
| Domicile | | | |
| | Lombardia | 17 | 68 |
| | Liguria | 8 | 32 |
| Geographic location | | | |
| | Urban | 7 | 28 |
| | Suburban | 15 | 60 |
| | Rural | 3 | 12 |

Interviews conducted using the Ethnoscience method allowed us to draw a taxonomy of older people's experiences with health promotion. Particularly, this taxonomy featured three different types of health promotion experiences (i.e., "locked position"; "awakening position"; "climbing position"), which represented four main experiential domains (i.e., see Figure 1). Each position reflects specific representations, emotions, behaviours and subjective meanings. First, we summarized the semantic areas and experiential domains related to health promotion experiences of the older north-Italian adults enrolled in the study that emerged from the interview (i.e., see Figure 2). Thereafter, the taxonomies related to the three types of health promotion experiences that emerged from working collaboratively with interviewees are presented below (i.e., see Figure 1).

< Insert Figure 1 about here >

< Insert Figure 2 about here >



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185 **Older citizens' experiences with health promotion: Main domain of subjective meanings**

186 The following four main semantic areas emerged from the older citizens' accounts of their health
187 promotion experiences.

188

189 ***Physical care***. For older participants, promoting health and wellbeing evoked experiences of care of
190 their physical body. Thus, emotions related to becoming sick, being adherent to medical
191 prescriptions and to health checks, having in mind that managing own health and preventing future
192 health problems is a daily and crucial effort were important experiential domains of taking care of
193 their physical health.

194

195 *I'd name this group 'contact with my health', that is the contact with my body and with the*
196 *awareness about the possibility that it could become sick*
197 (int. 14, M, 70 years old).

198

199 ***Daily lifestyle***. Participants referred to this area when speaking about daily lifestyle, including
200 factors such as physical activity, diet, and risk behaviours (alcohol, smoke). In their words, "*daily*
201 *habits are the litmus test of my health, of my life*" (int. 14, M, 73 years-older). Participants also
202 considered respect and awareness of limits, rules and boundaries as important when engaging in the
203 suggested health promoting behaviours and when effectively promoting health through physical
204 care.

205

206 *This group speaks about activities of everyday life to manage my health, how to do sport, eat...how*
207 *can we call it: lifestyle?*
208 (int. 20, M, 68 years old).

209

210 ***Contact with aging***. Participants referred to "being in contact with aging" or "living and perceiving



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aging" to define the relationship with their age and their capacity to take the best from ageing. This domain of meanings regards also life objectives and the level of life satisfaction, the personal acceptance of ageing, and the individual levels of self-esteem. Participants considered those factors as important in the successful aging process, consequently, in experiencing high levels of health and wellbeing.

*It is also important how you live your age: how do you enjoy the present days? Are you in contact with your ageing?*

(int. 18, F, 65 years old).

***Soul care***. Finally, participants spoke about the importance of taking care of their mental health to support and promote their wellbeing. Participants described this area in terms of happiness, self-esteem and perceived control over life and health.

*This is more a question of head, mental. It's how I feel at this moment and it's more a mental fact to love and accept myself and feel that life is in my hands...of course, it takes a little bit of luck*

(int. 15, F, 68 year old).

**Older citizens' experiences of health promotion: A taxonomy of experiences**

The analysis of all individual taxonomies produced by interviewees during the q-sort tasks (and related to their subjective experience of health promotion) helped draft a final inclusive taxonomy of older citizens' health promotion experiences featuring three main positions described in detail in the following paragraphs.

**First position: "I feel locked"**

Interviews revealed that the first experiential position of older citizens' health promotion was



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237 characterized by a blocked and frozen attitude towards health, which consequently lead to unhealthy
238 lifestyles and habits. Lack of work and social network, emotional resignation, lack of purpose, and
239 unhealthy behaviours (i.e., cigarettes, alcohol abuse) were reported as elements characterizing this
240 position. Older participants often attributed the lack of healthy behaviours to a general lack of self-
241 care and life purposes and used negative emotional words to refer to the relationship of this position
242 with health. Participants reported a similar approach to health as characterized by lack of love and
243 self-acceptance, which often characterized the entire life but was exacerbated by aging-related
244 issues (e.g., retirement, death of loved ones, loss of a social role, menopause). Generally, interviews
245 showed that thinking about different ways to promote health during aging was scary and anxiety
246 provoking for people in this position; thus, "continuing life as usual", avoiding negative emotions
247 and frightening thoughts that would emerge if health was in daily projects was reported as the main
248 attitude of individuals in this position. This position was represented in terms of feeling "locked" in
249 an unhappy last part of life.
250
251 *After all, my life is ok for me, so I do absolutely nothing to change it...I'm fine by myself as well, so I*
252 *don't really look for particular situations to increase what I should do to feel better..*
253 (int. 20, M, 65 years old).
254 *I have an identity issue in organizing my health, I get anxious to thinking about it and I prefer to*
255 *continue my life as usual*
256 (int. 18, F, 65 years old).
257
258 Furthermore, the participants reported that health practices were inextricably linked to religious
259 beliefs. Indeed, people in this position usually represented themselves as delegating their health
260 management to others. Although this helped them avoid negative emotions, these beliefs
261 contributed to reduce health promotion actions. Consequently, a fatalistic attitude with feelings of
262 resignation and dissatisfaction with life was reported. These feelings also influenced the approach to



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risk prevention and health promotion. Regarding people in this position, the emergence of diseases could not be controlled; thus, following healthy lifestyles to prevent diseases would be useless.

*It is useless to worry about what may happen and what can be done to prevent mishaps…cancer or other diseases can occur also if you have an optimal lifestyle…*

(int. 25, M, 68 years old).

Since the missing approach to health management was characterized by resignation, older participants reported that lack of purpose, worries, and fears of losing autonomy or remaining alone were able to "*upsets*" and "*awake*" them from the disengagement in health. The worries motivated them to seek sources of more positive feelings and hope towards future life trajectories.

*I absolutely do not follow prevention, but if any serious illness came, I would be forced to change to regain my health*

(int.1, M, 65 years old).

*You can change in the event that a disease hits you, so you become scared, so your lifestyle changes*

(int. 20, M, 65 years old).

*I stopped smoking thanks to a book that made me aware that depending on cigarettes made me miserable and that convinced me that having fun would help me*

(int.16, M, 73 years old).

**Second position: "I'm awakening"**

Some other citizens, mostly with a good social network but without strong and supportive relationships, described themselves as seesawing in managing health between a health awareness ward and a lack of motivation to improve their health during aging, with the general adoption of a healthy lifestyle without the awareness of risks due to aging. Unlike the "locked position," in the



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289 "awakening position", older citizens alternated between a fatalistic and a more active attitude
290 toward health and life, perceiving some situations as being under their control. People in this
291 position represented themselves as caring about their health only when sick, but lacking motivation
292 and perceiving loss of control over their health when recovering from the disease.
293
294 *Obviously, I take care of my health when I'm sick to heal! But when I heal I do nothing to stay*
295 *healthy: It's useless, it's not under your control!*
296 (int. 10, F, 65 years old).
297
298 As participants stated, although people in this position was aware of the importance of engaging in
299 healthy behaviours, engaging in physical activities, eating better, and planning meaningful activities
300 to feel healthier, they preferred to leave health out of daily plans. Thus, they were described as
301 aware but often inactive in managing and promoting health. Accordingly, they were classified as
302 having an "awakening" status. They described themselves as having understood the importance of
303 engaging in healthy behaviours at the "theoretical level," but in the practice, they reported failure to
304 translate this knowledge into concrete health promoting and preventive behaviours (e.g., doing
305 more physical activity, paying attention to diet, going to health checks). Furthermore, these older
306 citizens often failed to recognize their actual need to "do more" to improve their lifestyle,
307 particularly because aging requires a greater attention to physical limits and to a global self-care.
308 Focusing on prevention and modifying their lifestyles according to the limitations and barriers that
309 emerge during the process of aging were perceived as highly connected to the acceptance of
310 growing old and thus to the participants' experiences of aging. Finally, a sort of emotive
311 ambivalence towards their aging process characterised this position. On the one hand, feelings of
312 guilt for doing the bare minimum and, on the other hand, the desire to avoid being concerned with
313 health increased the disconnect between actions and thoughts. In this sense, social relationships
314 were conceived as useful in fostering a more active health engagement and planning daily habits

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among individuals in this position.

*I know that I should do sport, in the past I used to go to the gym but in the recent years, I finally chose the oratory and not the gym, whereas I know that this is not the better choice for me*

(int. 23, F, 68 years old).

*Doing something with someone could help me to be more active*

(int. 18, F, 65 years old).

*Setting my own goals for the future and getting busy with daily commitment lead me to feel better... for example gardening or spending my time out, I'm sure that will bring benefit to my mind*

(int. 24, M, 65 years old).

**Third position: "I'm aware that I'm climbing"**

This experiential position was described in terms of a better-integrated approach to health promotion. Important features of this position included being constantly aware of the importance of taking care of the self to remain healthy and feel good physically, mentally, and socially. People in this position successfully gave sense to their life and elaborated on the inevitability of death, which allows them to live fully every day. They were conscious that the physical health influences well-being in all other spheres of human existence and that taking care of oneself increases wellness and happiness and fosters one's own sense of control over life trajectories. Thus, a strong sense of coherence, control, and self-efficacy, as well as a greater motivation to feel aware and reflexive emerged from the interviews as important factors to be engaged in healthy aging. In this sense, this position was defined as "*climbing*" because of the constant efforts made by this citizens to master their entire health status and wellbeing.

*As I do something, I think about the consequence of what I'm doing to prevent diseases and how I'm*



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*feeling*

(int. 3, M, 75 years old).

*At a certain age, you have to start thinking about your health and yourself, sooner or later something happens … there is an exponential curve between age and health, and I'm at the point in which something will happen…so I'm aware that I want to live the last years fully and peacefully!*

(int. 22, M, 75 years old).

*Loving and accepting each other is the foundation of everything, it gives you a purpose of life, it makes you feel that it's you at the helm*

(int. 14, M, 73 years old).

People in this position were represented as having successfully managed critical events (such as the occurrence of health problems or the deaths of friends and relatives) by elaborating their sense within the whole spectrum of their existence and in the light of a positive approach to life. People in this position shared the personal objective of contributing to the wealth of the world to have a sense of life and die peacefully. According to participants, being in peace with life, aging, and death fosters wellbeing and positive engagement in healthy lifestyle.

*Sooner or later, life ends. It is important to have the satisfaction of having done something, to have done things, to have left something...more than the fear of death, I'd rather end in a particular way*

(int. 22, M, 75 years old).

*The problem is not to avoid diseases but to live with them in a decent way and in line with your life*

(int. 18, F, 65 years old).

These citizens were described as believing that their own actions determine their health. Perceptions of having control over health and life foster, as older participants said, proactive behaviours and a sense of power and agency. Being able to face anxiety related to taking



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responsibility for their health status, having control over all health dimensions, and strengthening feelings of self-determination were also important features of this position.

*This is more a question of head, mental. It's how I feel at this moment and It's more a mental fact to love and accept myself and feel that life is in my hands...of course it takes a little bit of luck* (int. 15, F, 68 year old).

Relationships also played an active part in the "climbing position", because playing an active social role in the community was conceived as a way to have a purpose in life and to be part of something bigger, which can give sense to life and death.

*Sooner or later life ends, it is important to reach the satisfaction of having done something, of having left something, of having made a small contribution to other people...* (int. 22, M, 75 years-older).

Additionally, participants explained their wellbeing as dependent also on *"having the possibility to be free, also to exceed bounds sometimes"* (int.5, F, 67 years-older). Indeed, engaging in bad habits occasionally is perceived as useful to maintain engagement in a balanced healthy lifestyle, avoiding the risk of becoming too obsessive about healthy behaviours and enjoying old age more fully.

## Discussion

This qualitative study explored older citizens' experiences of health promotion. Those experiences may be placed along a subjective continuum of engagement, with one pole representing the experiences of participants with lower levels of engagement, such as those who report resignation,



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inactivity and poor sense of agency and control over their health and preventive conducts, and the opposite pole representing the experiences of participants with high level of engagement in their health promotion who described themselves as attentive and committed to adopt healthy aging lifestyles and legitimate themselves as responsible for their physical and mental health promotion. These insights are in line with the results of a study on the effect of lay perspectives of the role of successful aging in fostering personal and community wellbeing [34]. This study [34], by emphasizing the balance between self-contentment and self-growth in later life, suggested that reaching high levels of health engagement is related to higher levels of self-growth, self-contentment, and individual and social fulfilment. Our results showed that individuals' subjective experiences and meaning making processes frame the way in which they are able to manage health. Moreover, our data provide an insight into the complex and challenging nature of older people' experiences of engagement in health promotion conducts. The experiential trajectories that emerged from our study revealed the importance of supporting older citizens' positive sense-making process to improve their aging and health promotion. For instance, participants in a "locked position" reported the protective role of positive emotions on their physical and mental health over time by confirming evidences from positive psychology literature [35-38]. Considering the emotional conflict between being aware of the importance of assuming healthier conducts and the difficulty in translating this knowledge to concrete behaviours of health prevention and health promotion, which characterize the "awakening position", behavioural education may be useful for these older citizens, also to foster a greater psychological integration between "actions and thoughts". For instance, planning daily habits, setting goals and activating social support are all useful strategies for improving older citizens' engagement in health promotion. In this direction, technologies might be particularly useful for planning healthy behaviours and connecting with other members of community with whom older citizens could share health practices.

Older citizens in the "climbing profile" may maintain their engagement in health promotion by sustaining their mental and psychological tenure, for instance with exercises or counselling aimed at



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419 fostering their self-efficacy, self-empowerment, cognitive reinforce, self-worth, and purpose in life.
420 These factors are indeed crucial for "optimising aging well and enhancing the quality of later life,
421 enabling older people to feel confident in living with wider benefits to society" [39, p.9]. Older
422 citizens' ability to maintain meaningful social relationships is also important in the "climbing
423 position" and needs to be supported because having an active social role in the community was
424 conceived as a way to have a purpose in life and to be "*part of something bigger*", which can give
425 sense to life and death.

426 These results suggest that interventions aimed at promoting health in aging should consider the
427 subjective experiences of older citizens and the elements that may sustain or hinder their
428 engagement in healthy conducts. In particular, our results emphasized the importance of favouring
429 the emergence of older citizens positive psychological attitudes towards health and ageing (e.g.,
430 positive emotions, motivation and goal setting, fulfilment and self-improvement) to improve their
431 engagement in health promotion. To date, different studies and interventions are available to
432 confirm the effective value of working on such psychological states to foster health behaviour
433 change [40-46]. Most studies considered populations with chronic conditions; thus, they were
434 mainly aimed to improve medication adherence and disease management [40, 42-45] and were not
435 specifically targeting older samples [40, 42-44] and health promotion initiatives. The few studies
436 carried out with older populations were mostly aimed at enhancing mental wellbeing and quality of
437 life [37,38,45].

438

439

440 **Study limits and future research**

441

442 The findings of this study contribute to deepen the subjective experience of older citizens' health
443 promotion by underlining the elements that may sustain or inhibit their engagement in such
444 conducts. The study focused deliberately on exploring the individuals' contribute of older



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445 participants in engaging in their health promotion and, although participants and literature
446 envisaged the importance of the social context [47], this aspect was only marginally explored.
447 Surely, social initiatives of health promotion should be grounded in expectations and needs of
448 citizens, but a balance between individual needs and common needs has to be considered when
449 designing and delivering such initiatives [47].
450 Furthermore, the study reported the reflections of participants on their health actions. Thus,
451 although the method adopted allowed understanding implicit meanings related to individual
452 experiences by studying language used by participants, techniques to give voice to the unconscious
453 aspects that can potentially influence an individual's behaviors and actions were not adopted.
454 A limitation of our study concerns the characteristics of our sample. Older adults living in other
455 parts of Italy (and in other countries) may have different perceptions and experiences. However,
456 through the analysis of the experiences that the participants recounted, only themes that all
457 participants endorsed were extracted to include only the most common beliefs. The inclusion of
458 participants younger than 75 years of age at the time of the interview was deliberate in order to
459 explore experiences of and needs towards health promotion initiatives of a population that may best
460 benefit from health prevention and promotion initiatives. We are aware that health promotion
461 experiences and needs would change in an older segment of the population. Further studies may
462 deepen this age group specific needs and experiences. Furthermore, the choice of the Ethnoscience
463 method required that participants enrolled in the study had sufficient linguistic and reflexive skills
464 to complete the q-sorting tasks. Further explorations are needed to assess the health promotion
465 experiences and needs of citizens with different levels of educational and cognitive skills.
466 Finally, further studies are needed to investigate factors (i.e., demographical, clinical, personality,
467 cultural) that might influence the process of older citizens' engagement in health promotion. We are
468 aware of these limits of the study and for this reason, we are proceeding with a wider quantitative
469 study on a larger sample to further verify our results, to collect further information of the
470 experiences of older people' engagement in health promotion, and to verify the variables



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(sociological, demographical and psychological) that may predict such experiences. Future research should seek to support ecological, feasible, and effective interventions with an aim to foster older people's engagement in health promotion. Similar results would guide the development of interventions that would successfully involve older citizens in healthy aging conducts.

**Conflict of interests**

The authors declare no conflict of interest.

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**Contributorship statement**

JM conducted interviews and all analyses, wrote the first draft of the manuscript and rewrote new drafts based on input from co-authors. GG designed the research project, planned the analyses and provided input and revision of manuscript drafts. All authors read and approved the final manuscript.

DB and AP assisted with the interviews, transcribed them, and helped with analyses of the data.

**Competing interests**

None declared

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All authors have completed the ICMJE uniform disclosure form at



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www.icmje.org/coi_disclosure.pdf and declared that all authors had financial support from Catholic University (Faculty of Psychology - Project "D3.2. Crescere da anziani: Attivare risorse per stili di vita sostenibili") for the submitted work; had no financial relationships with any organisation that might have an interest in the submitted work in the previous three years; and had no other relationships or activities that could appear to have influenced the submitted work. The funder had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

**Data sharing statement**

Original quotes and audio data of interviews are available upon request by emailing the corresponding author. Consent for the data sharing was not obtained, but the presented data were anonymised and the risk of identification was low.

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**Figure Legend**

Figure 1. Taxonomy of older citizens' experiences of health promotion

Figure 2. Semantic areas and domains of subjective meanings of older citizens' experiences with health promotion



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| Semantic areas | Experiential domains | Locked Position | Awaikening Position | Climbing Position |
|---|---|---|---|---|
| Daily Lifestyle | Physical activity | *I spend more time on the couch then in activity* | *Anytime I have the chance I take a walk, but I surely have to stay more active* | *I do the physical activity that I have to do and that is good for me* |
| | Diet | *Paying attention to what I'm eating is a waste of time* | *I pay attention to my diet, some food is bad for me but I however eat it* | *I pay attention to follow a healthy diet* |
| | Bad habits | *I have some bad habits (alcohol, tobacco…) that are by now in my routine and it's ok for me* | *I have some little bad habit that I want to remove but I not always succeed* | *I rarely make an exception and when it happens is important for me to manage and balance it* |
| | Daily activation | *I do not decide on committments* | *I'm active but I don't plan it* | *I plan my day to be committed to useful activities* |
| Physical Care | Bound respect | *I always exceed the limit* | *I do not always follow what I have to do to be well* | *I listen my body to consequently regulate my habits and be well* |
| | Disease emotions | *I'm not so worried when I feel some pain* | *Feeling pains frightens me and I don't know how to manage this emotions* | *Feeling pains frightens me but I know how to manage this emotions* |
| | Disease management | *When I'm sick I avoid to think about this and I do nothing* | *When I'm sick I'm a little bit worried, I try to have some rest and to wait until it ends* | *When I'm sick I activate myself to collect information and take care of myself* |
| | Health mentalization | *I barely do not think to my health* | *When I'm not well I manage my health, when I'm well I don't think to manage my health* | *Considering my age, I think to my health daily* |
| | Prescriptions adherence | *I'm not constant in following what others say to me and in carrying out the health checks* | *I adhere to what others say to me but I autonomously don't do nothing to manage my health* | *I autonomously check and seek information for my health, so I can prevent future health problems* |
| Contact with ageing | Acceptance | *I don't feel the years I have* | *Maybe I have not accepted yet my age and started to manage at best this phase of life* | *I accepted my age and I behave accordingly* |
| | Life objectives/satisfaction | *I loll on what is now my life condition* | *I don't have many life goals but, in general, I'm satisfied* | *I'm motivated to reach my life goals and this satisfies me* |
| Soul care | Self-esteem | *I'm not happy about my self* | *I live together with my self* | *I love my self* |
| | Happiness | *I'm not happy just as before* | *Sometimes I'm happy but it doesn't depend on me* | *I'm really happy and serene in this phase of life* |
| | Perceived control | *You don't decide your life* | *Destiny is important, but you have a role in this* | *My life depends on me* |
| | Social relationships | *I don't take care of my relationships and I don't' seek company* | *I've some good relationship but when I'm needy I prefer to stay on my own* | *I can rely on my actual and future relationships* |

Figure 1: Taxonomy of older citizens' experiences of health promotion
742x524mm (120 x 120 DPI)

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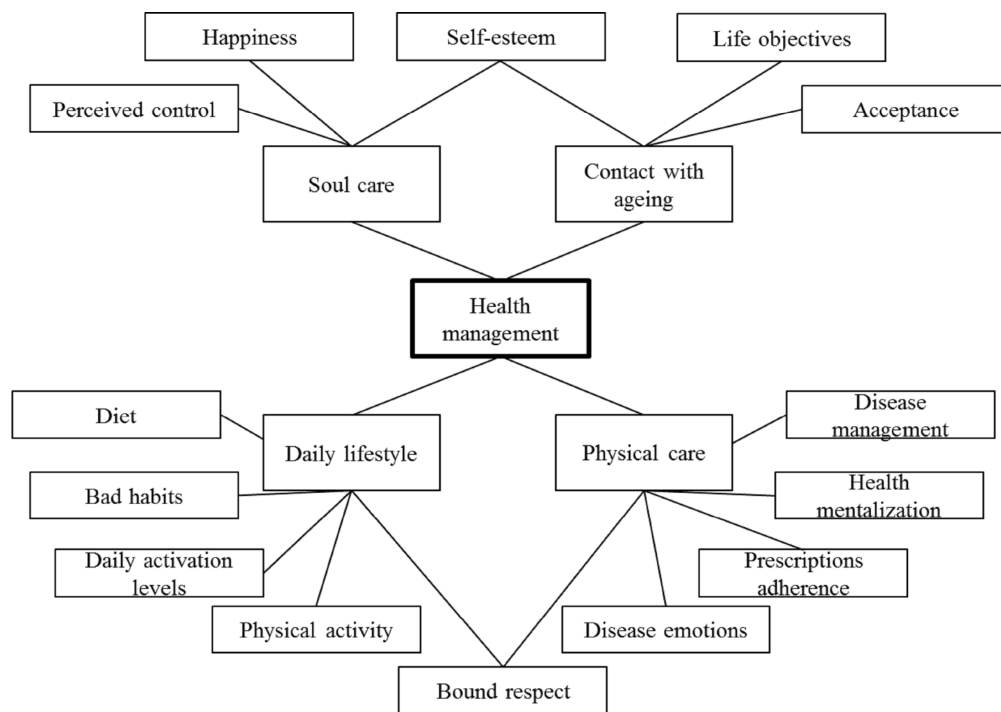


Figure 2: Semantic areas and domains of subjective meanings of older citizens' experiences with health promotion
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# Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

Developed from:
Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

| No. Item | Guide questions/description | Reported on Page # |
|---|---|---|
| **Domain 1: Research team and reflexivity** | | |
| *Personal Characteristics* | | |
| 1. Inter viewer/facilitator | Which author/s conducted the inter view or focus group? | Page 8 |
| 2. Credentials | What were the researcher's credentials? E.g. PhD, MD | MS |
| 3. Occupation | What was their occupation at the time of the study? | They were working as consultant researchers for the University that promoted the study |
| 4. Gender | Was the researcher male or female? | One male and one female |
| 5. Experience and training | What experience or training did the researcher have? | Page 8 |
| *Relationship with participants* | | |
| 6. Relationship established | Was a relationship established prior to study commencement? | No |
| 7. Participant knowledge of the interviewer | What did the participants know about the researcher? e.g. personal goals, reasons for doing the research | Researchers did not disclose personal details before commencing the study |
| 8. Interviewer characteristics | What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic | There was no bias evident from researchers when the study was carried out |
| **Domain 2: study design** | | |
| *Theoretical framework* | | |
| 9. Methodological orientation and Theory | What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis | Page 7 |

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| *Participant selection* | | |
|---|---|---|
| 10. Sampling | How were participants selected? e.g. purposive, convenience, consecutive, snowball | Page 11 |
| 11. Method of approach | How were participants approached? e.g. face-to-face, telephone, mail, email | Page 6. Centers were approached via telephone/e-mail. Participants via face-to-face or telephone. |
| 12. Sample size | How many participants were in the study? | Page 12 |
| 13. Non-participation | How many people refused to participate or dropped out? Reasons? | None of the invited participants refused to participate |
| *Setting* | | |
| 14. Setting of data collection | Where was the data collected? e.g. home, clinic, workplace | Page 11 |
| 15. Presence of non-participants | Was anyone else present besides the participants and researchers? | No |
| 16. Description of sample | What are the important characteristics of the sample? e.g. demographic data, date | Page 12 |
| *Data collection* | | |
| 17. Interview guide | Were questions, prompts, guides provided by the authors? Was it pilot tested? | Page 9. The interviews' guide was tested with one volunteer participant before commencing the study and it was found to be useful and acceptable. |
| 18. Repeat interviews | Were repeat inter views carried out? If yes, how many? | Page 8 |
| 19. Audio/visual recording | Did the research use audio or visual recording to collect the data? | Page 12. All interviews were audiotaped. |
| 20. Field notes | Were field notes made during and/or after the inter view or focus group? | No |
| 21. Duration | What was the duration of the inter views or focus group? | Page 9 |
| 22. Data saturation | Was data saturation discussed? | Data saturation was discussed among those coding the transcripts |
| 23. Transcripts returned | Were transcripts returned to participants for comment and/or correction? | No |
| **Domain 3: analysis and findings** | | |

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| *Data analysis* | | |
|---|---|---|
| 24. Number of data coders | How many data coders coded the data? | Page 11 |
| 25. Description of the coding tree | Did authors provide a description of the coding tree? | No, documentation is available upon request |
| 26. Derivation of themes | Were themes identified in advance or derived from the data? | Page 11 |
| 27. Software | What software, if applicable, was used to manage the data? | None |
| 28. Participant checking | Did participants provide feedback on the findings? | No. Participants provided feedback on the main findings of the first round of interviews in the second round of interviews. |
| *Reporting* | | |
| 29. Quotations presented | Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number | Results |
| 30. Data and findings consistent | Was there consistency between the data presented and the findings? | Yes |
| 31. Clarity of major themes | Were major themes clearly presented in the findings? | Results |
| 32. Clarity of minor themes | Is there a description of diverse cases or discussion of minor themes? | N/A |

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BMJ Open

# How older citizens engage in their health promotion: A qualitative research driven taxonomy of experiences and meanings



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# How older citizens engage in their health promotion: A qualitative research driven taxonomy of experiences and meanings

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**Abstract**

*Objectives*: In this qualitative study, we provide an in-depth exploration of older people's experiences and subjective meanings concerning their engagement in health promotion as well as the emotional and pragmatic difficulties they face during their engagement.

*Methods*: The study was designed according to the Ethnoscience method, which implies a participatory process that values patients' linguistic expressions to deeply understand the phenomena under the investigation and to give it a meaning. Using this method, thanks to repeated rounds of interviews and q-sorting task, participants created a dictionary, with the assistance of researcher, to describe the phenomenon of interest. They agreed on a shared taxonomy of meanings and experiences related to the phenomenon. Twenty-five North Italian older citizens participated in this study.

*Results*: Participants described a shared taxonomy of health engagement experiences by depicting three main positions (i.e., "locked position"; "awakening position"; "climbing position"), which represented different experiential domains grouped by participants into four main semantic areas (e.g., physical care, soul care, daily lifestyle, contact with ageing). Each position is characterized by specific emotions, personal representations of meaning and healthy behaviours that may sustain or hinder older citizens' engagement in health promotion.

*Conclusions*: The results of the present study suggest the importance of deeply understanding older peoples' experiences and their subjective meanings of health promotion. Particularly, the results showed how their engagement in health promotion is framed in a complex system of psychological meanings, which may sustain or hinder their ability to adopt healthy behaviours. A deeper understanding of older citizens' lived experiences, their doubts, and their difficulties in engaging in health promotion may offer some important cues for orienting interventions in this area.

Keywords:

health promotion, patient engagement, healthy aging, older people, qualitative research,

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Ethnoscience

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**Strengths and limitations of this study**

- To the best of our knowledge, this is the first qualitative study investigating older citizens' experiences, motivations, and attitudes towards their health promotion.
- The Ethnoscience method allowed us to unveil subjective meanings of older citizens' health promotion experiences.
- The Ethnoscience method allowed us to adopt a truly participative process of research where older citizens collaborated with the researchers in the construction of a shared vocabulary and taxonomy of their health promotion experiences.
- These qualitative evidences cast light on subjective meanings and experiences that may sustain or hinder older citizens' engagement in their health promotion.
- Our study is limited by a locally selected sample.

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1 **Introduction**

2 Societies worldwide are facing an increasingly aging population because of the rapid decline in
3 mortality in the past few decades due to scientific and technological progress [1]. In Italy, life
4 expectancy has increased by 2 years in the last 10 years; however, people actually live the last third
5 of their lives with at least one chronic condition [2]. The rapid growth of the aging population poses
6 important challenges, specifically those related to the health of older people [3]. Most societies need
7 to promote healthy behaviours, prevent diseases, and develop effective and ecological low-cost
8 strategies to effectively manage healthcare burdens associated with the aging of the population [4].
9 In the literature, different theoretical models have been developed with the aim to promote health
10 behaviour changes in patients/citizens, working at individual, interpersonal, or community levels.
11 For example, looking at the individual level, the health belief model, which has been widely
12 adopted, recognizes the importance of people's beliefs about health problems, perceived benefits of
13 and barriers to action, cues to action, and self-efficacy in explaining engagement in health-
14 promoting behaviours [5-7]. Differently, the Transtheoretical model conceives behaviour change as
15 a process comprising five levels of readiness to change (i.e., pre-contemplation, contemplation,
16 preparation, action, and maintenance) through which individuals progress to adopt healthy or
17 eliminate unhealthy behaviours [8]. Additionally, the social cognitive theory was adopted at
18 individual and interpersonal levels to understand the ways in which personal cognitive factors (e.g.,
19 self-efficacy, observational learning, expectations) can represent a third interface between
20 individual and social environment that can sustain behaviour change [9]. Similarly, the theory of
21 planned behaviour links beliefs to health behaviours and suggests the ways in which behaviours,
22 subjective norms, and perceived behavioural control, together could shape an individual's
23 behavioural intentions and thus behaviours [10]. Most of these models, however, failed to consider
24 cultural and age-related factors, which are needed to explain differences in health promoting
25 behaviours [11,12]. Indeed, since older adults differ from younger cohorts in important ways in
26 terms of their health status, living situation, wellbeing, and educational level [13,14], the

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investigation of the process of engagement in health promotion among older adults is likely to be useful when considering such differences. Consequently, studies on the determinants that, from an individual perspective, may sustain or hinder the engagement of older citizens in health promotion by giving voice to older citizens' experiences are needed [15-17].

The goal of the present study was to provide an in-depth understanding of older citizens' experiences with health promotion, with a particular reference to the subjective meanings and elements that – from older citizens' perspective – may favour or hinder such experiences. Based on these premises, the aims of the study were two-fold:

- To involve older citizens in a participatory research process aimed at drafting a shared taxonomy of meanings and representation related to their health promotion experience.
- To deepen factors of older citizens' experiences that may sustain or hinder their engagement in health promotion.

Following the recent activities of the European Union on aging [18], we aspire to provide the knowledge base for the promotion of appropriate strategies and interventions to enhance older citizens' engagement in health promotion and improve their life conditions by deliberately focusing on a particular age group (older people younger than 75 years old), which could particularly benefit from health promotion initiatives, as they are in most cases still fit, active, and able to care for themselves. Consequently, improving healthy habits in this subgroup of older citizens may not only be more doable, but also prevent negative clinical situations [19]. It is not surprising that most preventive measures and health promotion initiatives focused on this 'younger' age group to stave off health-related problems in the next decades [20,21].

## Method

Design



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53 A qualitative study designed according to the Ethnoscience method [22] was adopted to involve
54 older citizens in the construction of a common vocabulary and in a shared taxonomy related to their
55 health management experiences. This method assumes the importance of studying language (and
56 the way language is used) to understand implicit meanings related to individual experiences. The
57 linguistic choices made by speakers when describing their health management attitudes and
58 behaviours may indeed uncover the social representations, emotional experiences, and
59 psychological attitudes of people towards their health. This may be particularly meaningful when
60 the phenomenon under the investigation is complex and "abstract" (such as discussing about one
61 owns engagement in health promotion) and when interviewees may find it difficult to reflect deeply
62 upon their related experiences. Ethnoscience is based on repeated semi-structured interviews and q-
63 sorting tasks to allow the flexible investigation of the phenomena under investigation and to study
64 the lexical expressions of participants when describing their experiences (see par. on Data collection
65 and procedure) [23]. The Q-sorting technique is a general methodology used to gather and process a
66 person's viewpoint as well as to categorize a complex phenomenon [24]. By Q-sorting, people
67 reveal their individual way to categorize a phenomenon and give sense to a particular reality
68 [25,26]. In detail, all interviewees were interviewed twice. In the first round, they were required to
69 reflect upon their health promotion experiences following a semi-structured guide of interview and
70 a non-directive moderation style. In the second round of interviews, they were asked to engage in a
71 participative analysis process aimed at drafting a shared vocabulary and taxonomy of health
72 promotion experiences thanks to Q-sort tasks. Particularly, the tasks involved selecting cards (which
73 reported linguistic extracts from previous interviews) that reflected their health promotion
74 experience, grouping the selected cards, assigning a name to each group, reflecting on the
75 relationships among groups, and providing insights on the factors that are able to foster/obstruct
76 older people's health promotion experiences (see the next paragraph for further details).
77
78 Data collection and procedure



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79 Participants were involved in two sequential rounds of semi-structured interviews. Two researchers
80 conducted the interviews together (JM, DB). Both of them were psychologists trained in qualitative
81 methods.

82 - The first round of interviews posed broad questions to collect the data on the meanings and
83 representations of health promotion, concrete daily habits, engagement in healthy lifestyles,
84 and situations that foster or obstruct active engagement in health promotion (see Table 1 for
85 details). Additional questions were asked, when needed, to elicit further details. Questions
86 posed by researchers who adopt the Ethnoscience method are usually broad and open-ended
87 to elicit narratives from the participants and collect all possible statements, opinions, and
88 experiences from the respondents about the phenomenon under the investigation [27]. All
89 interviews were fully transcribed, and selected recurrent linguistic expressions used by
90 interviewees to describe their health promotion experience were reported verbatim on cards:
91 one linguistic expression per each card (see paragraph Data Analysis for further details).

92 - All interviewees were re-interviewed after the first phase of the data analysis to construct a
93 shared taxonomy of their health promotion experiences in collaboration with the researchers.
94 In particular, this second round of interviews implied Q-sorting tasks. The first Q-sorting
95 task asked participants to select the meanings and linguistic expressions reported on the
96 cards that best represented their experience and engagement in health promotion (i.e.,
97 "*please select the cards that mainly represent you*") and to eliminate the cards, which they
98 felt were far from their subjective experience. In the second task, participants were invited to
99 group and categorize the selected cards based on spontaneously agreed upon homogeneity
100 criteria ("*among the cards you selected, can you identify group of cards that can be linked*
101 *together?*"). This second task allowed the investigation of spontaneous categorization and,
102 thus, of individuals' representational domains. This task formed the basis of the first
103 "taxonomies of meanings" spontaneously created by participants during their interviews
104 ("*How do the groups of cards relate among them? What is the reason of these linkages?*



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105 *What do this emerging taxonomy means to you?*”).

106 Each interview was completed in the individual’s home or at participants’ place of preference. The
107 interviews ranged from 40 to 90 minutes, with an average duration of 60 minutes.

108

109 Table 1

110 *First Round of Interviews’ Guide*

| Area | Questions |
|---|---|
| **Meanings and representations of health and health promotion** | 1. *Let’s introduce what health means to you… let’s describe this using your words*<br>2. *What does promoting health means to you?* |
| **Concrete daily actions to promote health** | 3. *Could you describe me your lifestyle in the last week?*<br>4. *How do you manage health daily?*<br>5. *Could you describe a real situation where you promoted your health? What happened and what have you done? Why? Who were the actors? Have you involved someone? When you healed, you managed health in the same way?* |
| **Feelings, thoughts, behaviours when** | 6. *What are your feelings and thoughts when you reflect on how you are promoting health? What can you do to improve your health?* |



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| **thinking at health promotion** | |
| | 7. *In your opinion, why are people differently engaged in their health promotion? What do you think about your engagement in health promotion?* |
| **Perspectives and experiences of engagement in health promotion** | 8. *Do you think that is possible to become more or less engaged in health promotion? How? Could you describe me some situation or event that changed your engagement?*<br>9. *What would help you in being more engaged in promoting your health?* |

Participants

A purposive sample of 25 North-Italian older adults was sequentially recruited to participate in the study [28]. Potential participants were recruited through several means. First, citizens were recruited from different senior centres (e.g., community centers, activity centers, recreation associations, community recreation centers), which were contacted by telephone or e-mail and invited to take part in the study. Individuals with the desired characteristics were then asked to recommend similar participants from their social networks, starting a "process analogous to a snowball rolling down a hill" [29,30]. Thus, a snowball sampling technique was adopted [31], which is particularly useful to reach vulnerable or hard-to-reach groups in a more effective, pragmatic, and culturally competent way [29].

The inclusion criteria were:



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123 (i) being 65-75 years of age (this range was selected because people who are younger than 75 years
124 of age may particularly benefit from engaging in health promoting behaviours in terms of
125 prevention of future health problems; furthermore, this target population is more likely to engage in
126 health promotion initiatives compared to individuals older than 75 years of age);
127 (ii) being able to express themselves with well-articulated stories and to deeply reflect on their
128 stories (e.g., people with mental health problems or impairing physical conditions were excluded);
129 (iii) being able to understand and speak Italian; and
130 (iv) being willing to participate in the study.
131
132 Data analysis
133 All interviews were transcribed verbatim and analysed using a thematic analysis with an inductive
134 approach [32]. Two researchers analysed and coded the transcripts independently to identify the key
135 words, phrases, and expressions, which the participants repeatedly used to describe their health
136 promotion experiences. In a joint meeting, the researchers discussed and reached an agreement on a
137 list of selected linguistic expressions. This process resulted in a shared "dictionary" containing
138 words/phrases that were then printed onto cards to be used in the second phase of the research
139 process: the Q-sort tasks. These tasks were completed during the second round of interviews. The
140 researchers kept track of card-sorting choices made by each participant during the second round of
141 interviews. Based on spontaneous card sorting and grouping by each participant, researchers were
142 able to draft a taxonomy of meanings and experiences (one for each participant), presenting the
143 results of the card sorts in a table form. In a separate meeting, the researchers compared the
144 taxonomies derived from the card-sort tasks to identify common thematic patterns and to develop a
145 final, inclusive and synthetic taxonomy of older citizens' health promotion experiences. When
146 disagreement emerged, the researchers reached a consensus through discussion.
147 The results are reviewed below, and they include some quotes extracted from the interviews to
148 support our results. The researchers involved in the data collection and analysis translated the



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149 quotes selected for this article into English together with the assistance of an Italian and English
150 speaking translator [33]. Finally, a professional native English translator corrected and checked the
151 translations [33]. Original quotes are available upon request.

152

153 Ethical concerns

154 The Catholic University of Milan Ethics Review Board approved the study. Each participant was
155 free to participate and withdraw from the research and was informed about the procedures of the
156 study. All participants consented to participate in the study (including audiotaping and transcription
157 of the interviews) by signing a written consent form. Information that could identify participants
158 was removed, and each interviewee was assigned an identification number to protect his/her
159 anonymity.

160

161 **Findings**

162

163 Thirteen females and 12 males who met the inclusion criteria were included in the study. Most
164 participants lived predominantly in Lombardy (68 per cent) and in villages or small towns of
165 suburban areas (60 per cent) while only 7 lived in Liguria (28 per cent). The age ranged from 65 to
166 75 years of age (mean age of 67.8 years). The sample comprised primarily retired participants.
167 Overall, 23 participants resided with a family member (in most cases with their spouse/partner) and
168 7 of them lived with two or more family members (generally the husband/wife and adult children).
169 Two older adult participants lived alone but near a family member. For further details, see Table 2.

170

171 Table 2

172 *Overview of the Composition of the Sample*

| **Features** | **n** | **%** |
|---|---|---|



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| | | n | % |
|---|---|---|---|
| Gender | | | |
| | Female | 13 | 52 |
| | Male | 12 | 48 |
| Marital status | | | |
| | Married | 23 | 92 |
| | Not married | 2 | 8 |
| Employment | | | |
| | Worker | 8 | 32 |
| | Not worker | 17 | 68 |
| Domicile | | | |
| | Lombardia | 17 | 68 |
| | Liguria | 8 | 32 |
| Geographic location | | | |
| | Urban | 7 | 28 |
| | Suburban | 15 | 60 |
| | Rural | 3 | 12 |

Interviews conducted using the Ethnoscience method allowed us to draw a taxonomy of older people's experiences of health promotion. Particularly, this taxonomy featured three different types of health promotion experiences (i.e., "locked position"; "awakening position"; "climbing position"), which represented four main experiential domains (i.e., see Figure 1). Each position reflects specific representations, emotions, behaviours and subjective meanings. First, we summarized the semantic areas and experiential domains related to health promotion experiences of the older north-Italian adults enrolled in the study that emerged from the interviews (i.e., see Figure 2). Thereafter, the taxonomies related to the three types of health promotion experiences that emerged from working collaboratively with interviewees are presented below (i.e., see Figure 1).



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**Older citizens' experiences of health promotion: Main domain of subjective meanings**

The following four main semantic areas emerged from the older citizens' accounts of their health promotion experiences.

***Physical care***. For older participants, promoting health and wellbeing evoked experiences of care of their physical body. Thus, emotions related to becoming sick, being adherent to medical prescriptions and to health checks, having in mind that managing own health and preventing future health problems is a daily and crucial effort were important experiential domains of taking care of their physical health.

*I'd name this group 'contact with my health', that is the contact with my body and with the awareness about the possibility that it could become sick*

(int. 14, M, 70 years old).

***Daily lifestyle***. Participants referred to this area when speaking about daily lifestyles, including factors such as physical activity, diet, and risk behaviours (alcohol, smoke). In their words, "*daily habits are the litmus test of my health, of my life*" (int. 14, M, 73 years-older). Participants also considered respect and awareness of limits, rules and boundaries as important when engaging in the suggested health promoting behaviours and when effectively promoting health through physical care.

*This group speaks about activities of everyday life to manage my health, how to do sport, eat...how can we call it: lifestyle?*



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(int. 20, M, 68 years old).

***Contact with aging***. Participants referred to "being in contact with aging" or "living and perceiving aging" to define the relationship with their age and their capacity to take the best from ageing. This domain of meanings regards also life objectives and the level of life satisfaction, the personal acceptance of ageing and the individual levels of self-esteem. Participants considered those factors as important in the successful aging process and consequently in experiencing high levels of health and wellbeing.

*It is also important how you live your age: how do you enjoy the present days? Are you in contact with your ageing?*

(int. 18, F, 65 years old).

***Soul care***. Finally, participants spoke about the importance of taking care of their mental health to support and promote their wellbeing. Participants described this area in terms of happiness, self-esteem and perceived control over life and health.

*This is more a question of head, mental. It's how I feel at this moment and it's more a mental fact to love and accept myself and feel that life is in my hands...of course, it takes a little bit of luck*

(int. 15, F, 68 year old).

**Older citizens' experiences of health promotion: A taxonomy of experiences**

The analysis of all individual taxonomies produced by interviewees during the q-sort tasks (and related to their subjective experience of health promotion) helped draft a final inclusive taxonomy of older citizens' health promotion experiences featuring three main positions described in detail in the following paragraphs.



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**First position: "I feel locked"**

Interviews revealed that the first experiential position of older citizens' health promotion was characterized by a blocked and frozen attitude towards health, which consequently leads to unhealthy lifestyles and habits. Lack of work and social network, emotional resignation, lack of purpose, and unhealthy behaviours (i.e., cigarettes, alcohol abuse) were found to characterize this position. Older participants often attributed the lack of healthy behaviours to a general lack of self-care and life purposes and used negative emotional words to refer to the relationship of this position with health. Participants reported a similar approach to health characterized by lack of love and self-acceptance, which often exemplifies the entire lifespan, although it is exacerbated by aging-related issues (e.g., retirement, death of loved ones, loss of a social role, menopause). Generally, interviews showed that thinking about different ways to promote health during aging was scary and anxiety provoking for people in this position; thus, "continuing the life as usual", avoiding negative emotions and frightening thoughts that would emerge if health was in daily projects. This position was represented in terms of feeling "locked" in an unhappy last part of life.

*After all, my life is ok for me, so I do absolutely nothing to change it...I'm fine by myself as well, so I don't really look for particular situations to increase what I should do to feel better..*

(int. 20, M, 65 years old).

*I have an identity issue in organizing my health, I get anxious to thinking about it and I prefer to continue my life as usual*

(int. 18, F, 65 years old).

Furthermore, the participants reported that health practices were inextricably linked to religious beliefs. Indeed, people in this position usually represented themselves as delegating their health management to others. Although this helped them avoid negative emotions, these beliefs



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contributed to the reduction of health promotion actions. Consequently, a fatalistic attitude with feelings of resignation and dissatisfaction with life was reported. These feelings also influenced the approach to risk prevention and health promotion. Regarding people in this position, the emergence of diseases could not be controlled; thus, following healthy lifestyles to prevent diseases would be useless.

*It is useless to worry about what may happen and what can be done to prevent mishaps…cancer or other diseases can occur also if you have an optimal lifestyle…*

(int. 25, M, 68 years old).

Since the missing approach to health management was characterized by resignation, older participants reported that lack of purpose, worries, and fears of losing autonomy or remaining alone were able to "*upsets*" and "*awake*" them from the disengagement in health. The worries motivated them to seek sources of more positive feelings and hope towards future life trajectories.

*I absolutely do not follow prevention, but if any serious illness came, I would be forced to change to regain my health*

(int.1, M, 65 years old).

*You can change in the event that a disease hits you, so you become scared, so your lifestyle changes*

(int. 20, M, 65 years old).

*I stopped smoking thanks to a book that made me aware that depending on cigarettes made me miserable and that convinced me that having fun would help me*

(int.16, M, 73 years old).

**Second position: "I'm awakening"**

Some other citizens, mostly with a good social network but without strong and supportive



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relationships, described themselves as alternating in managing health between a health awareness and a lack of motivation to improve their health during aging, with the general adoption of a healthy lifestyle without the awareness of risks due to aging. Unlike the "locked position," in the "awakening position", older citizens alternated between a fatalistic and a more active attitude toward health and life, perceiving some situations as being under their control. People in this position represented themselves as caring about their health only when sick but lacked motivation and perceived loss of control over their health when recovering from the disease.

*Obviously, I take care of my health when I'm sick to heal! But when I heal I do nothing to stay healthy: It's useless, it's not under your control!*

(int. 10, F, 65 years old).

Although participants in this position were aware of the importance of engaging in healthy behaviours, engaging in physical activities, eating better, and planning meaningful activities to feel healthier, they preferred to leave health out of daily plans. Thus, they were described as aware but often inactive in managing and promoting health. Accordingly, they were classified as having an "awakening" status. They described themselves as having understood the importance of engaging in healthy behaviours at the "theoretical level," but in practice, they reported failure to translate this knowledge into concrete health promoting and preventive behaviours (e.g., doing more physical activity, paying attention to diet, going to health checks). Furthermore, these older citizens often failed to recognize their actual need to "do more" to improve their lifestyle, particularly because aging requires a greater attention to physical limits and to a global self-care. Focusing on prevention and modifying their lifestyles according to the limitations and barriers that emerge during the process of aging were perceived as highly connected to the acceptance of growing old and thus to the participants' experiences of aging. Finally, a sort of emotive ambivalence towards their aging process characterised this position. On the one hand, feelings of guilt for doing the bare minimum



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and, on the other hand, the desire to avoid being concerned with health increased the disconnect between actions and thoughts. In this sense, social relationships were conceived as useful in fostering a more active health engagement and planning daily habits among individuals in this position.

*I know that I should do sport, in the past I used to go to the gym but in the recent years, I finally chose the oratory and not the gym, whereas I know that this is not the better choice for me* (int. 23, F, 68 years old).

*Doing something with someone could help me to be more active* (int. 18, F, 65 years old).

*Setting my own goals for the future and getting busy with daily commitment lead me to feel better... for example gardening or spending my time out, I'm sure that will bring benefit to my mind* (int. 24, M, 65 years old).

**Third position: "I'm aware that I'm climbing"**

This experiential position was described in terms of a better-integrated approach to health promotion. Important features of this position included being constantly aware of the importance of taking care of the self to remain healthy and feel good physically, mentally, and socially. People in this position gave sense to their life and elaborated on the inevitability of death successfully, which allowed them to live fully every day. They were conscious that the physical health influences well-being in all other spheres of human existence and that taking care of oneself increases wellness and happiness and fosters one's own sense of control over life trajectories. Thus, a strong sense of coherence, control, and self-efficacy, as well as a greater motivation to feel aware and reflexive emerged from the interviews as important factors of healthy aging. In this sense, this position was defined as "*climbing*" because of the constant efforts of participants to master their entire health



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status and wellbeing.

*As I do something, I think about the consequence of what I'm doing to prevent diseases and how I'm feeling*

(int. 3, M, 75 years old).

*At a certain age, you have to start thinking about your health and yourself, sooner or later something happens … there is an exponential curve between age and health, and I'm at the point in which something will happen…so I'm aware that I want to live the last years fully and peacefully!*

(int. 22, M, 75 years old).

*Loving and accepting each other is the foundation of everything, it gives you a purpose of life, it makes you feel that it's you at the helm*

(int. 14, M, 73 years old).

People in this position were represented as having successfully managed critical events (such as the occurrence of health problems or the deaths of friends and relatives) by elaborating their sense within the whole spectrum of their existence and in the light of a positive approach to life. People in this position shared the personal objective of contributing to the wealth of the world to have a sense of life and die peacefully. According to participants, being in peace with life, aging, and death fosters wellbeing and positive engagement in healthy lifestyle.

*Sooner or later, life ends. It is important to have the satisfaction of having done something, to have done things, to have left something...more than the fear of death, I'd rather end in a particular way*

(int. 22, M, 75 years old).

*The problem is not to avoid diseases but to live with them in a decent way and in line with your life*

(int. 18, F, 65 years old).



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These participants were described as believing that their own actions determine their health. Perceptions of having control over health and life foster, as older participants said, proactive behaviours and a sense of power and agency. Being able to face anxiety related to taking responsibility for their health status, having control over all health dimensions, and strengthening feelings of self-determination were also important features of this position.

*This is more a question of head, mental. It's how I feel at this moment and It's more a mental fact to love and accept myself and feel that life is in my hands...of course it takes a little bit of luck*

(int. 15, F, 68 year old).

Relationships also played an active part in the "climbing position" because playing an active social role in the community was conceived as a way to have a purpose in life and to be part of something bigger, which can give sense to life and death.

*Sooner or later life ends, it is important to reach the satisfaction of having done something, of having left something, of having made a small contribution to other people...*

(int. 22, M, 75 years-older).

Additionally, participants explained their wellbeing as dependent also on *"having the possibility to be free, also to exceed bounds sometimes"* (int.5, F, 67 years-older). Indeed, engaging in bad habits is occasionally perceived as useful to maintain engagement in a balanced healthy lifestyle, avoiding the risk of becoming too obsessive about healthy behaviours and enjoying old age more fully.

## Discussion



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2 392 This qualitative study explored older citizens' experiences of health promotion. Those experiences
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4 393 may be placed along a subjective continuum of engagement. One pole of the continuum represents
5
6 394 the experiences of participants with lower levels of engagement, such as those who report
7
8 395 resignation, inactivity and poor sense of agency and control over their health. The opposite pole
9
10 396 represents the experiences of participants with high level of engagement in their health promotion
11
12 397 who described themselves as attentive, committed to adopt healthy aging lifestyles and legitimate
13
14 398 themselves as responsible for their physical and mental health promotion. These insights are in line
15
16 399 with the results of a study on the effect of lay perspectives of the role of successful aging in
17
18 400 fostering personal and community wellbeing [34]. This study [34], by emphasizing the balance
19
20 401 between self-contentment and self-growth in later life, suggested that reaching high levels of health
21
22 402 engagement is related to higher levels of self-growth, self-contentment, and individual and social
23
24 403 fulfilment. Our results showed that individuals' subjective experiences and meaning-making
25
26 404 processes frame the way in which they are able to manage health. Moreover, our data provide an
27
28 405 insight into the complex and challenging nature of older people' experiences of engagement in
29
30 406 health promotion conducts. The experiential trajectories that emerged from our study revealed the
31
32 407 importance of supporting older citizens' positive sense-making process to improve their aging and
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34 408 health promotion. For instance, participants in a "locked position" reported the protective role of
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36 409 positive emotions on their physical and mental health over time by confirming evidences from
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38 410 positive psychology literature [35-38]. Considering the emotional conflict between being aware of
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40 411 the importance of assuming healthier conducts and the difficulty in translating this knowledge to
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42 412 concrete behaviours of health prevention and health promotion, which characterize the "awakening
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44 413 position", behavioural education may be useful for these older citizens, as it can foster a greater
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46 414 psychological integration between "actions and thoughts". For instance, planning daily habits,
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48 415 setting goals and activating social support are all useful strategies for improving older citizens'
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50 416 engagement in health promotion. In this direction, technologies might be particularly useful for
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52 417 planning healthy behaviours and connecting with other members of community with whom older
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citizens could share health practices.

Older citizens in the "climbing profile" may maintain their engagement in health promotion by sustaining their mental and psychological tenure, for instance, with exercises or counselling aimed to foster their self-efficacy, self-empowerment, cognitive reinforce, self-worth, and purpose in life. These factors are indeed crucial for "optimising aging well and enhancing the quality of later life, enabling older people to feel confident in living with wider benefits to society" [39, p.9]. Older citizens' ability to maintain meaningful social relationships is also important in the "climbing position" and needs to be supported because playing an active social role in the community was conceived as a way to have a purpose in life and to be "*part of something bigger*", which can give sense to life and death.

These results suggest that interventions aimed at promoting health in aging should consider the subjective experiences of older citizens and the elements that may sustain or hinder their engagement in healthy conducts. In particular, our results emphasized the importance of favouring the emergence of older citizens' positive psychological attitudes towards health and ageing (e.g., positive emotions, motivation and goal setting, fulfilment and self-improvement) to improve their engagement in health promotion. Currently, different studies and interventions are available to confirm the effective value of working on such psychological states to foster health behaviour change [40-46]. Most studies considered populations with chronic conditions; thus, they mainly aimed to improve medication adherence and disease management [40, 42-45] and did not specifically target older samples [40, 42-44] and health promotion initiatives. The few studies carried out with older populations mostly aimed to enhance mental wellbeing and quality of life [37,38,45].

**Study limits and future research**



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444 The findings of this study contribute to deepen the subjective experience of older citizens' health
445 promotion by underlining the elements that may sustain or inhibit their engagement in such
446 conduct. The study focused deliberately on exploring how older participants individually contribute
447 to their engagement in their health promotion. The social context was only marginally explored,
448 although it can play an important role in individual health engagement trajectories [47]. Surely,
449 social health promotion initiatives should be grounded in expectations and needs of citizens, but a
450 balance between individual needs and common needs has to be considered when designing and
451 delivering such initiatives [47].

452 Furthermore, the study reported on the reflections of participants on their health actions. Thus,
453 although the method adopted allowed us to understand implicit meanings related to individual
454 experiences by studying language used by participants, techniques to give voice to the unconscious
455 aspects that can potentially influence an individual's behaviors and actions were not adopted.

456 A limitation of our study concerns the characteristics of our sample. Older adults living in other
457 parts of Italy (and in other countries) may have different perceptions and experiences. However,
458 through the analysis of the experiences that the participants recounted, only themes that all
459 participants endorsed were extracted with an aim to include only the most common beliefs. The
460 inclusion of participants younger than 75 years of age at the time of the interview was deliberate in
461 order to explore experiences of and needs towards health promotion initiatives of a population that
462 may best benefit from health prevention and promotion initiatives. We are aware that health
463 promotion experiences and needs would change in an older segment of the population. Further
464 studies are needed to explore the specific needs and experiences of older populations. Furthermore,
465 the choice of the Ethnoscience method required that participants enrolled in the study had sufficient
466 linguistic and reflexive skills to complete the q-sorting tasks. Further explorations are needed to
467 assess the health promotion experiences and needs of citizens with different levels of educational
468 and cognitive skills.

469 Finally, further studies are needed to investigate factors (i.e., demographical, clinical, personality,



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cultural) that might influence the process of older citizens' engagement in health promotion. We are aware of these limits of the study and for this reason, we plan to conduct a wider quantitative study on a larger sample to further verify our results, to collect further information of the experiences of older people' engagement in health promotion, and to verify the variables (sociological, demographical and psychological) that may predict such experiences. Future research should seek to support ecological, feasible, and effective interventions with an aim to foster older people's engagement in health promotion. Similar results would guide the development of interventions that would successfully involve older citizens in healthy aging conducts.

**Conflict of interests**

The authors declare no conflict of interest.

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**Contributorship statement**

JM conducted interviews and all analyses, wrote the first draft of the manuscript and rewrote new drafts based on input from co-authors. GG designed the research project, planned the analyses and provided input and revision of manuscript drafts. All authors read and approved the final manuscript.

DB and AP assisted with the interviews, transcribed them, and helped with analyses of the data.

**Competing interests**



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**Data sharing statement**

Original quotes and audio data of interviews are available upon request by emailing the corresponding author. Consent for the data sharing was not obtained, but the presented data were anonymised and the risk of identification was low.

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637 **Figure Legend**

638 Figure 1. Taxonomy of older citizens' experiences of health promotion

639 Figure 2. Semantic areas and domains of subjective meanings of older citizens' experiences with
640 health promotion

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| Semantic areas | Experiential domains | Locked Position | Awakening Position | Climbing Position |
|---|---|---|---|---|
| Daily Lifestyle | Physical activity | *I spend more time on the couch then in activity* | *Anytime I have the chance I take a walk, but I surely have to stay more active* | *I do the physical activity that I have to do and that is good for me* |
| | Diet | *Paying attention to what I'm eating is a waste of time* | *I pay attention to my diet, some food is bad for me but I however eat it* | *I pay attention to follow a healthy diet* |
| | Bad habits | *I have some bad habits (alcohol, tobacco…) that are by now in my routine and it's ok for me* | *I have some little bad habit that I want to remove but I not always succeed* | *I rarely make an exception and when it happens is important for me to manage and balance it* |
| | Daily activation | *I do not decide on committments* | *I'm active but I don't plan it* | *I plan my day to be committed to useful activities* |
| Physical Care | Bound respect | *I always exceed the limit* | *I do not always follow what I have to do to be well* | *I listen my body to consequently regulate my habits and be well* |
| | Disease emotions | *I'm not so worried when I feel some pain* | *Feeling pains frightens me and I don't know how to manage this emotions* | *Feeling pains frightens me but I know how to manage this emotions* |
| | Disease management | *When I'm sick I avoid to think about this and I do nothing* | *When I'm sick I'm a little bit worried, I try to have some rest and to wait until it ends* | *When I'm sick I activate myself to collect information and take care of myself* |
| | Health mentalization | *I barely do not think to my health* | *When I'm not well I manage my health, when I'm well I don't think to manage my health* | *Considering my age, I think to my health daily* |
| | Prescriptions adherence | *I'm not constant in following what others say to me and in carrying out the health checks* | *I adhere to what others say to me but I autonomously don't do nothing to manage my health* | *I autonomously check and seek information for my health, so I can prevent future health problems* |
| Contact with ageing | Acceptance | *I don't feel the years I have* | *Maybe I have not accepted yet my age and started to manage at best this phase of life* | *I accepted my age and I behave accordingly* |
| | Life objectives/satisfaction | *I loll on what is now my life condition* | *I don't have many life goals but, in general, I'm satisfied* | *I'm motivated to reach my life goals and this satisfies me* |
| Soul care | Self-esteem | *I'm not happy about my self* | *I live together with my self* | *I love my self* |
| | Happiness | *I'm not happy just as before* | *Sometimes I'm happy but it doesn't depend on me* | *I'm really happy and serene in this phase of life* |
| | Perceived control | *You don't decide your life* | *Destiny is important, but you have a role in this* | *My life depends on me* |
| | Social relationships | *I don't take care of my relationships and I don't' seek company* | *I've some good relationship but when I'm needy I prefer to stay on my own* | *I can rely on my actual and future relationships* |

Figure 1: Taxonomy of older citizens' experiences of health promotion
1237x874mm (72 x 72 DPI)

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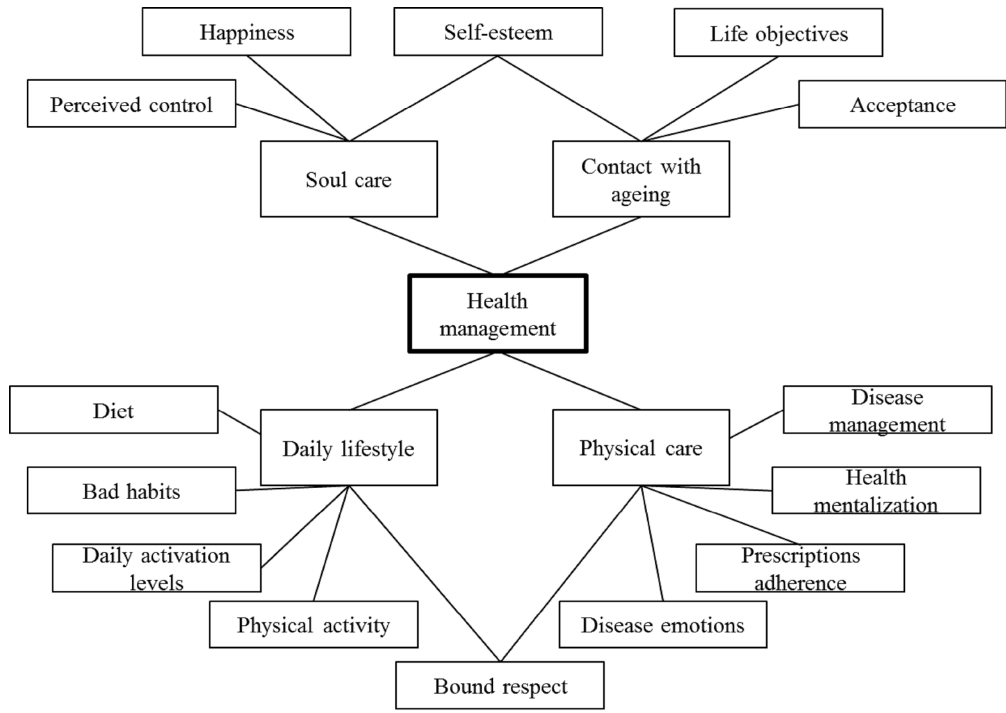


Figure 2: Semantic areas and domains of subjective meanings of older citizens' experiences with health promotion
742x524mm (120 x 120 DPI)

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# Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

Developed from:
Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

| No. Item | Guide questions/description | Reported on Page # |
|---|---|---|
| **Domain 1: Research team and reflexivity** | | |
| *Personal Characteristics* | | |
| 1. Inter viewer/facilitator | Which author/s conducted the inter view or focus group? | Page 8 |
| 2. Credentials | What were the researcher's credentials? E.g. PhD, MD | MS |
| 3. Occupation | What was their occupation at the time of the study? | They were working as consultant researchers for the University that promoted the study |
| 4. Gender | Was the researcher male or female? | One male and one female |
| 5. Experience and training | What experience or training did the researcher have? | Page 8 |
| *Relationship with participants* | | |
| 6. Relationship established | Was a relationship established prior to study commencement? | No |
| 7. Participant knowledge of the interviewer | What did the participants know about the researcher? e.g. personal goals, reasons for doing the research | Researchers did not disclose personal details before commencing the study |
| 8. Interviewer characteristics | What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic | There was no bias evident from researchers when the study was carried out |
| **Domain 2: study design** | | |
| *Theoretical framework* | | |
| 9. Methodological orientation and Theory | What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis | Page 7 |

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| *Participant selection* | | |
|---|---|---|
| 10. Sampling | How were participants selected? e.g. purposive, convenience, consecutive, snowball | Page 11 |
| 11. Method of approach | How were participants approached? e.g. face-to-face, telephone, mail, email | Page 6. Centers were approached via telephone/e-mail. Participants via face-to-face or telephone. |
| 12. Sample size | How many participants were in the study? | Page 12 |
| 13. Non-participation | How many people refused to participate or dropped out? Reasons? | None of the invited participants refused to participate |
| *Setting* | | |
| 14. Setting of data collection | Where was the data collected? e.g. home, clinic, workplace | Page 11 |
| 15. Presence of non-participants | Was anyone else present besides the participants and researchers? | No |
| 16. Description of sample | What are the important characteristics of the sample? e.g. demographic data, date | Page 12 |
| *Data collection* | | |
| 17. Interview guide | Were questions, prompts, guides provided by the authors? Was it pilot tested? | Page 9. The interviews' guide was tested with one volunteer participant before commencing the study and it was found to be useful and acceptable. |
| 18. Repeat interviews | Were repeat inter views carried out? If yes, how many? | Page 8 |
| 19. Audio/visual recording | Did the research use audio or visual recording to collect the data? | Page 12. All interviews were audiotaped. |
| 20. Field notes | Were field notes made during and/or after the inter view or focus group? | No |
| 21. Duration | What was the duration of the inter views or focus group? | Page 9 |
| 22. Data saturation | Was data saturation discussed? | Data saturation was discussed among those coding the transcripts |
| 23. Transcripts returned | Were transcripts returned to participants for comment and/or correction? | No |
| **Domain 3: analysis and findings** | | |

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| *Data analysis* | | |
|---|---|---|
| 24. Number of data coders | How many data coders coded the data? | Page 11 |
| 25. Description of the coding tree | Did authors provide a description of the coding tree? | No, documentation is available upon request |
| 26. Derivation of themes | Were themes identified in advance or derived from the data? | Page 11 |
| 27. Software | What software, if applicable, was used to manage the data? | None |
| 28. Participant checking | Did participants provide feedback on the findings? | No. Participants provided feedback on the main findings of the first round of interviews in the second round of interviews. |
| *Reporting* | | |
| 29. Quotations presented | Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number | Results |
| 30. Data and findings consistent | Was there consistency between the data presented and the findings? | Yes |
| 31. Clarity of major themes | Were major themes clearly presented in the findings? | Results |
| 32. Clarity of minor themes | Is there a description of diverse cases or discussion of minor themes? | N/A |

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