

PREDICTING LATE MIDDLE-AGED PEOPLE'S PSYCHOLOGICAL WELLBEING: THE HEAVINESS OF THE INCOMPETENT METASTEREOTYPE

Camilla Matera^{*}, Amanda Nerini^{*}, Monica Paradisi^{*}, and Luana Chiti^{*}

The present study aimed to examine the link between late middle-aged adults' stereotypical and meta-stereotypical beliefs and their psychological wellbeing, considering the role of aging anxiety. Participants were 307 people aged between 50 and 64 years living in Italy, who completed a questionnaire assessing warmth and competence stereotypes and metastereotypes referred to their age group, aging anxiety, and psychological wellbeing. Path analysis revealed that competence metastereotypes were associated with psychological wellbeing via aging anxiety, while the link between either stereotypes or warmth metastereotypes, aging anxiety and wellbeing was not significant. These findings showed that metastereotypes significantly contribute to late middle-aged people's psychological functioning, especially for what concerns meta-perceived competence. Social and community interventions aimed at improving positive metastereotypes concerning late middle-aged people's abilities might reduce feelings of anxiety related to aging, with favourable outcomes on individuals' wellbeing.

Keywords: late middle-aged adults, older people, stereotypes, metastereotypes, aging anxiety, wellbeing

1. Introduction

Older people are often the subject of widely held and pervasive stereotypes and prejudice that have dramatically increased in recent years due to the COVID-19 pandemic, during which older people were described as the most vulnerable and useless part of the society (Fraser et al., 2020; Spaccatini et al., 2022). Ageism just refers to the process of systematic stereotyping and discrimination directed to some people based on their age (Butler, 1969; 1975). Western countries are permeated by ageism (Nelson, 2002; Palmore, 1990; World Health Organization, 2021), which is the most commonly experienced form of prejudice, with a profound impact on the attitudes and beliefs of people over 60 (Abrams & Swift, 2012).

Prejudice towards older people represents a relevant problem in Europe, where the population is constantly aging. In 2020, 21% of European people were aged 65 and over, compared with 16% in 2001. The median age has significantly increased in the period 2001 to 2020: it was 38 years in 2001, 41 years in 2010 and 44 years in 2020 (Eurostat, 2021). In Europe,

^{*} University of Florence, Italy.

Italy is worth special attention, being the third oldest population in the world, the same as Martinique, after Japan and Monaco (Statista, 2023). This country is aging at a much faster rate than its European Union peers (ISTAT, 2021). The average age of Italians in 2020 was 45.6 years for men and 48.6 years for women (Eurostat, 2021).

In Western countries the old age is generally depicted in a negative light and permeated by fragility and decline (Nelson, 2010; Vasil & Wass, 2006). Negative stereotypes towards older people can have detrimental effects on their lives, as they are associated with lower health, in terms of both physical and mental functioning, lower wellbeing (for reviews see Chang et al., 2020; Dionigi, 2015; Lamont et al., 2015) and decreased participation in social activities (Swift et al., 2017).

Notably, nobody ages overnight; ageing is a very slow process, to the extent that the World Health Organization (2021) recently defined an older person as a person whose age has passed the median life expectancy at birth, namely individuals above the age of 50. In line with such a definition, we can state that the aging process starts in late middle age, when experiencing age-related changes might bring on heightened anxiety about the future (Lynch, 2000). Late middle-aged people are going through a particular period of their life, during which they might not feel old or identify themselves as older adults in terms of their appearance and daily behavior, but they still experience conditions of early physical aging (Jin et al. 2022). Indeed, early signs of aging appear at the age of 50, when a decrease in visual and hearing ability, attention, processing speed and memory can be observed (Dawes et al., 2014; Hatta et al., 2022; Karlamangla et al., 2017; Kolli et al., 2021). Reviewing studies conducted with people above the age of 55, Dionigi and colleagues (2015) found that both positive and negative stereotypes could have significant effects on their attitudes, behaviors and decisions, thus affecting their holistic health.

Although research on stereotypes about older people is increasing, comparatively little attention has been devoted to examining how late middle-aged people think their group is seen by the youth (i.e., their metastereotypes) and how these beliefs are linked to their psychological functioning. Through the present study we aimed to fill this gap by examining the link between both stereotypes and metastereotypes about late middle-aged people and wellbeing in a sample of Italian adults aged between 50 and 64, for whom the aging process has already begun. As we will see in the next paragraphs, it is our contention that aging anxiety might be responsible for the association between stereotypes, metastereotypes and wellbeing in this age group.

1.1 Stereotypes about older people

According to the Stereotype content model (SCM; Fiske et al., 2002), stereotypes are built upon two orthogonal dimensions, namely warmth and competence. Groups who are thought to be high in competence are believed to be intelligent, capable and competent, while people who are believed to be high on warmth are typically seen as sensitive, friendly, sincere. According to the SCM, the content of stereotypes is strictly linked to social structure; for subordinate and non-competitive groups, such as the one of older people, the positive stereotype of warmth together with the negative stereotype of low competence is likely to maintain the benefits and power of privileged groups.

Stereotypes related to older people tend to be complex, as both negative and positive traits are likely to be attributed to this group (e.g., Marques et al., 2014). Indeed, much research has shown that older people are typically seen as high on warmth and low on competence, which is referred to as the “doddering but dear” stereotype (Cuddy & Fiske, 2002). Although stereotypes of aging can be defined as social constructs that are culturally situated (Dionigi, 2015), such a mixed stereotypical belief, which encompasses both positive and negative traits, was found to be pervasive and stable across different contexts (Fasel et al., 2021). Notably, recent research has shown that the negative component of older people stereotypes (i.e., incompetence), is very hard to change, while the positive one (e.g., warmth), is more malleable (Cuddy et al., 2005).

The content of stereotypes is likely to affect prejudice; groups perceived to be high on warmth but low on competence, like older people, tend to elicit sympathy and pity (Cuddy et al., 2007; Fiske et al., 2002; Glick & Fiske, 2001). Although pity might look like a positive feeling, it can have detrimental effects on older people’s life, working as a self-fulfilling prophecy; according to the stereotype embodiment theory (Levy, 2009), people are likely to internalize the image of older people that is dominant within their culture, so that the belief that older people are no longer autonomous, contributing, capable, and skillful adults, makes them feeling helpless and effectively become dependent from others, with relevant deleterious effects on their health and wellbeing (Levy, 2009; Nussbaum et al., 2005).

1.2. Metastereotypes, intergroup relations and wellbeing

Whereas stereotypes can be defined as the perception that most members of a category share similar attributes (Brown, 2010), metastereotypes are defined as the stereotypes that individuals think an outgroup holds about their ingroup (Vorauer et al., 1998). Autostereotypes and metastereotypes do not always match, as people may view their group (i.e., stereotypes) more positively than they think that others see it (i.e., metastereotypes), due to the universal need for positive distinctiveness (Brewer, 1991; Tajfel & Turner, 1979). This is especially true for lower-status and stigmatized groups, such as the one composed of older people (Richeson & Shelton, 2006), for whom metastereotypes might be especially relevant (Lammers et al., 2008). Nevertheless, exploring age stereotypes and metastereotypes among young, middle-aged and older workers, Finkelstein and colleagues (2013) did not find such a pattern of results. According to their findings, older people (aged 51-84 years) thought to be viewed by younger workers less positively than they were effectively seen. They thought to be considered as boring, stubborn and grumpy, while they did not seem to realize that young people described them as responsible, mature and hard-working.

Much research has shown that metastereotypes play a pivotal role in intergroup attitudes and relations (Frey & Tropp, 2006; Kamans et al., 2009; Matera et al., 2015), being associated with intergroup anxiety and contact intentions with members of an outgroup (MacInnis, 2009; Matera & Catania, 2022). Notably, Fowler and Gasiorek (2020) found that, when exposed to positive rather than negative age-related metastereotypes, participants experienced lower levels of intergroup anxiety. In a large cross-national study on older adults who were 70 years of age and beyond, Vauclair et al. (2016) found that older people’s personal metaperceptions of both

warmth and competence were significantly and negatively related to perceived age discrimination.

Furthermore, research has shown that metastereotypes can impact individuals' psychological functioning, predicting mental health outcomes and wellbeing, in terms of life satisfaction, self-worth and psychological adjustment (Jerald et al., 2017; Hinton et al., 2019; Matera & Catania, 2022) across different life domains (Matera et al., 2020). To the best of our knowledge, only one previous research, conducted by Fasel et al. (2021), examined the effect of both stereotypes and metastereotypes on older people's wellbeing. Fasel and colleagues (2021) aimed to examine if older people's stereotypical and meta-stereotypical beliefs were differently associated with their wellbeing. They first tested their hypotheses in a sample of late middle-aged and older people aged between 51 and 94 years living in the UK. As predicted, the authors found that stereotypes and metastereotypes significantly differed, with the former being more positive than the latter. Moreover, metastereotypes predicted old people's wellbeing better than stereotypes, with the competence dimension being more relevant than the warmth one. These findings were then replicated in a sample of baby-boomers (aged 60-66 years) from Switzerland (Fasel et al., 2021). Nevertheless, the authors did not examine which psychological factors might be responsible for the observed relationships between variables. It is our contention that one of these factors could be aging anxiety.

1.3. Aging anxiety

Ageism is often studied together with aging anxiety, which is a multidimensional construct that can be defined as the combination of people's concerns or fears about getting older (Lasher & Faulkender, 1993; Lynch, 2000). Studies using different indicators of aging anxiety show that high aging anxiety is associated with worse health outcomes in later life, including more psychological distress (Barrett & Robbins, 2008). Aging anxiety is distinct from other forms of anxiety, such as death anxiety and general anxiety (Lasher & Faulkender, 1993), and seems to reach its peak just beyond middle age, when concerns about aging might be especially salient (Lynch, 2001).

The internalization of stereotypes about older people in a youth-focused culture has been identified as one of the main factors responsible for aging anxiety (Momtaz et al., 2021). Ramírez and Palacios-Espinosa (2016) and Ramirez et al. (2019) found that negative, but not positive, stereotypes about older people were associated with aging anxiety, namely with a greater concern with losing independence and abilities, and with rejection of the aging process. In the Italian context, Donizzetti (2019) found a positive correlation between stereotypes about older people and aging anxiety. Some previous research among middle-aged adults aged 45-65 showed that ageism is associated with increased aging anxiety, probably because it fosters individuals' fear of their future aging selves (Bergman et al., 2018). Notably, Bergman and Segel-Karpas (2021) found that the negative psychological consequences (e.g., depressive symptoms) of the internalization of ageist attitudes were relevant not only among older adults, but also among middle-aged adults aged 50-67.

Nevertheless, none of these studies distinguished between the different contributions of the warmth and competence dimensions of stereotypes, so that it is not clear if one of the two

dimensions might be more important in determining feelings of anxiety connected to the aging process. Moreover, the link between older people's metastereotypes and aging anxiety is completely unexplored.

1.4. The present study

Previous research has used an inconsistent age range to define someone as an "older adult", varying from 50 years of age upwards (Knight et al., 2021). Nevertheless, research on age metastereotypes has typically considered participants aged higher than 50 years as older adults (e.g., Fasel et al., 2021; Finkelstein et al., 2013). In this study we considered people aged between 50 and 64 as late middle-aged adults.

We aimed to expand previous knowledge about the association between late middle-aged people's both stereotypes and metastereotypes and wellbeing in many ways. First, we examined if aging anxiety was one of the mechanisms through which stereotypic and meta-stereotypic beliefs could be related to late middle-aged people's wellbeing. Although previous studies found a positive link between negative stereotypes and aging anxiety, and between aging anxiety and wellbeing, to the best of our knowledge, no previous study examined the link between stereotypes, aging anxiety and wellbeing at the same time. Notably, the link between metastereotypes and aging anxiety has never been investigated. Second, in examining the association between these variables, we also aimed to clarify if the two dimensions underlying stereotypes and metastereotypes (Competence and Warmth) are differently associated with aging anxiety and, in turn, with late middle-aged people's wellbeing. Based on previous research findings (e.g., Cuddy & Fiske, 2002), it is reasonable to believe that it is the lack of competence (rather than warmth) attributed to aging people to determine feelings of anxiety associated with aging. Finally, previous research examining the association between stereotypes, metastereotypes and psychological functioning (i.e., Fasel et al., 2021) assessed overall wellbeing, without distinguishing between different areas or domains. To further extend these previous findings, we considered wellbeing as a complex and multidimensional construct, which is made up of different components, namely, autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Ryff, 1989). The adoption of such a multifaceted conceptualization will allow us to identify which areas of wellbeing are especially associated with aging people's stereotypical and metastereotypical beliefs and feelings about aging.

Through our study we tested the following hypotheses.

Hypothesis 1. We hypothesized that both stereotypes and metastereotypes would be associated with late middle-aged adults' wellbeing, with a greater effect of the competence rather than the warmth dimension.

Hypothesis 2. We hypothesized that late middle-aged adults' stereotypes and metastereotypes would be related to aging anxiety, with a greater effect of the competence rather than the warmth dimension.

Hypothesis 3. We hypothesized that the relationship between either metastereotypes or stereotypes and psychological wellbeing would be mediated by aging anxiety, especially with respect to the competence dimension.

2. Method

2.1 Participants and procedure

The data of this study are publicly available through the Open Science Framework, at the link [https://osf.io/zfsj5/?view_only=7257ca416c93426a8f831b985cddec7b]. Participants were 307 adults aged between 50 and 64. Of the total sample, 212 were women and 95 were men. Participants' mean age was 56.22 (SD = 3.73). Most had Italian nationality (97.7 %), while 2.3 % had a different nationality. The majority of participants (64.5 %) was born in central Italy, 18.9 % in northern Italy, 13.7 % in southern Italy or islands, and the remaining 2.9 % abroad. Similarly, most of the participants (73.3 %) resided in central Italy, 16.6 % in northern Italy, 8.5 % in southern Italy or islands, and the remaining 1.6 % abroad. Regarding the level of education, the majority of participants reported to have a high school degree (52.8 %) followed by who had a master's degree (25.1 %), a middle school degree (13.4 %), a bachelor's degree (6.8 %); five persons affirmed to have a post-lauream degree while one reported to have completed only elementary school. Participants represented different occupational conditions including full-time job (73 %), part-time job (12.7 %), retired (5.5 %), housework (4.9 %), occasional job (3.3 %), unemployed (.3 %), and looking for a first occupation (.3 %). Regarding marital status, most participants reported to be married or cohabiting (72.3 %) followed by who divorced (12.1 %), who affirmed to be single (8.1 %), who has a partner (4.2 %), 2 % of widows/ers or other (1.3 %).

The questionnaire was administered through an online platform. Participation was voluntary and anonymous. Participants were invited to take part in a study on aging people's wellbeing. The only inclusion criterion was to be over 50 years old. Prior to the administration of the questionnaire, participants provided their informed consent. The questionnaire took about 20 minutes to complete. The data were collected between July and September 2023. This study was part of a broader research; people aged 65 or higher were excluded from the sample at a later stage. The procedures were designed in accordance with the American Psychological Association's guidelines on the ethical treatment of human subjects and were approved by the Ethical Committee of the University of Florence (Prot. n. 0148845).

2.1 Measures

2.1.1 Stereotypes

Stereotypes were assessed using three items measuring the Warmth dimension (i.e., friendly, true, sincere, $\alpha = .86$) and three items capturing the Competence dimension (i.e., skillful, capable, clever, $\alpha = .84$) (Matera et al., 2023). Participants were asked to indicate what they thought adults of their age group were like, rating each adjective on a 7-point scale ranging from 1 (not at all) to 7 (very much). Higher scores indicated more positive stereotypes.

2.1.2 *Metastereotypes*

Participants' metastereotypes were assessed by asking participants what they believed young people thought of adults of their age group (Matera et al., 2023). The same adjectives used to assess stereotypes formed the Warmth ($\alpha = .86$) and the Competence dimensions respectively ($\alpha = .82$). Higher scores indicate more positive metastereotypes.

2.1.3. *Aging anxiety*

We used the Italian version (Donizzetti, 2012) of the Anxiety about Aging Scale (AAS; Lasher & Faulkender, 1993) to assess aging anxiety. The scale consists of 20 items rated on a 5-point Likert-like scale (1 = Completely agree; 5 = Completely disagree). High scores indicate high levels of aging anxiety. The internal consistency of the scale was good in the present study ($\alpha = .77$).

2.1.4 *Psychological wellbeing*

We used the Italian short form version (Sirigatti et al., 2009) of the Ryff's Psychological Well-Being Scale (RPWB; Ryff & Keyes, 1995) to measure aging adults' psychological wellbeing. This is an 18-item scale rated on a 6-point Likert-like scale (from 1 = definitively disagree, to 6 = definitively agree). The RPWB is composed of six subscales: autonomy (e.g., "I tend to be influenced by people with strong opinions"; $\alpha = .53$), personal growth (e.g., "For me, life has been a continuous process of learning, changing and growth."; $\alpha = .70$), self-acceptance (e.g., "When I look at the story of my life, I am pleased with how things have turned out"; $\alpha = .81$), purpose in life (e.g., "I don't have a good sense of what it is I am trying to accomplish in life"; $\alpha = .66$), positive relations (e.g., "I feel like I get a lot out of my friendship"; $\alpha = .55$), and environmental mastery (e.g., "The demands of everyday life often get me down"; $\alpha = .52$). Unfortunately, due to their excessively low reliability (lower than the .60 cut-off), the subscales Autonomy, Positive Relations and Environmental Mastery could not be further considered. The internal consistency of the overall scale, which was computed using all the 18 items, was good in the present study ($\alpha = .85$). For all the subscales, and the overall score, high scores indicate high levels of wellbeing.

2.1.4 *Socio-demographics*

Socio-demographic characteristics (e.g., sex, age) were assessed at the end of the questionnaire.

2.2 ***Data analyses***

We computed descriptive statistics and intercorrelations between all the research variables. T test for paired samples was used to compare mean scores on metastereotypes and stereotypes (warmth and competence). We then used path analysis to test our theoretical model (AMOS software; Arbuckle, 2019). We applied the maximum likelihood method of estimation. The Bootstrapping procedure (n boots = 2000) was used to estimate the presence and size of the

indirect (i.e., mediated) effects (Preacher and Hayes, 2008). The model fit was evaluated according to the criteria suggested by Schermelleh-Engel et al. (2003). To obtain a good fit, the χ^2 should not be significant. The χ^2/df was considered acceptable if it ranged between 2 and 3, while it indicated a very good fit if it is lower than 2. For comparative fit index (CFI), incremental fit index (IFI) and normed fit index (NFI), values between 0.95 and 0.97 were considered as indicating an acceptable model fit, while values higher than 0.97 suggested a very good model fit. For the root mean square error of approximation (RMSEA), values between 0.05 and 0.08 suggested an acceptable fit, while values lower than 0.05 indicated a very good fit.

3. Results

The data set did not contain missing values and all the research variables were normally distributed (skewness < .59, kurtosis < .70). Descriptive statistics of all the research variables are presented in Table 1.

Table 1. Descriptive statistics of the research variables

	Min	Max	M	SD	Asymmetry	Kurtosis
1.Competence stereotypes	1.00	7.00	3.86	1.37	.00	-.70
2.Warmth stereotypes	1.00	7.00	3.97	1.43	.16	-.61
3.Competence metastereotypes	1.00	7.00	3.86	1.26	.15	-.41
4.Warmth metastereotypes	1.00	7.00	4.01	1.35	.22	-.58
5.Aging anxiety	1.20	4.80	2.60	.63	.28	.03
6.Self-acceptance	1.33	6.00	4.20	1.16	-.32	-.65
7.Personal growth	1.67	6.00	4.71	1.06	-.59	-.48
8.Purpose in life	1.00	6.00	4.26	1.18	-.25	-.58
9.Overall wellbeing	2.33	6.00	4.27	.77	.02	-.48

Intercorrelations among variables are displayed in Table 2.

Table 2. Intercorrelations between the research variables

	1	2	3	4	5	6	7	8
1.Competence stereotypes	1							
2.Warmth stereotypes	.64***	1						
3.Competence metastereotypes	.52***	.57***	1					
4.Warmth metastereotypes	.39***	.64***	.75***	1				
5.Aging anxiety	-.15**	-.11	-.23***	-.16**	1			
6.Self-acceptance	.19***	.25***	.26***	.26***	-.28***	1		
7.Personal growth	.12*	.14*	.23***	.20***	-.14**	.55***	1	
8.Purpose in life	.16**	.19***	.26***	.23***	-.29***	.63***	.49***	1
9.Overall wellbeing	.19***	.22***	.30***	.26***	-.36***	.81***	.66***	.82***

* $p < .05$. ** $p < .01$. *** $p < .001$

Warmth stereotypes and metastereotypes were significantly correlated ($r = .64, p < .001$), as well as competence stereotypes and metastereotypes ($r = .52, p < .001$). Therefore, stereotypes and metastereotypes shared 27% of variance for competence and 41% for warmth. As regards the link between stereotypes, metastereotypes, aging anxiety and wellbeing, we can observe that all the correlations were significant.

T test for paired samples was used to compare mean scores on metastereotypes and stereotypes (warmth and competence). The mean scores reported by participants on stereotypes and metastereotypes were not significantly different for either competence, $t(306) = .04, p = n.s.$, or warmth, $t(306) = -.66, p = n.s.$ In line with the widespread mixed stereotype, late middle-aged people were thought to be warmer than competent, in terms of metastereotypes, $t(306) = -2.93, p < .01$, while the difference in terms of stereotypes was only marginally significant, $t(306) = -1.55, p = .06$.

Through path analysis we tested four conceptual models (Figure 1) in which the three dimen-

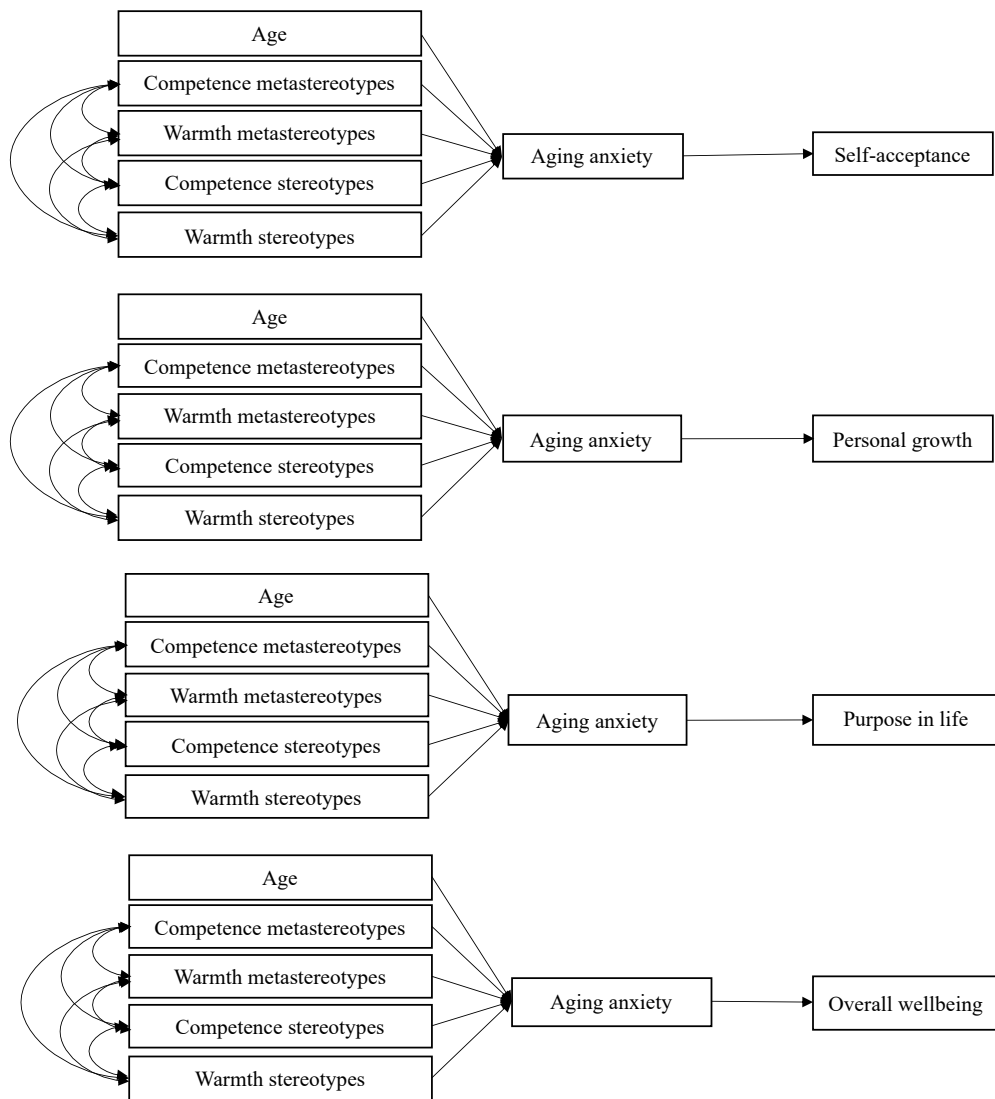


Figure 1. Hypothesized models: predictors of psychological wellbeing via aging anxiety

sions (Self-acceptance, Purpose in life, Personal growth) of psychological wellbeing (Ryff, 1989) were included respectively as the outcome variable. In each model we posited competence and warmth stereotypes and metastereotypes as indirect predictors of psychological wellbeing, via aging anxiety. In testing our models, we also controlled for the effect of age, which might be significantly related to participants' aging anxiety (Lynch 2002)

All of the models presented a good to excellent fit to the data. The standardized direct effects are presented in Figure 2.

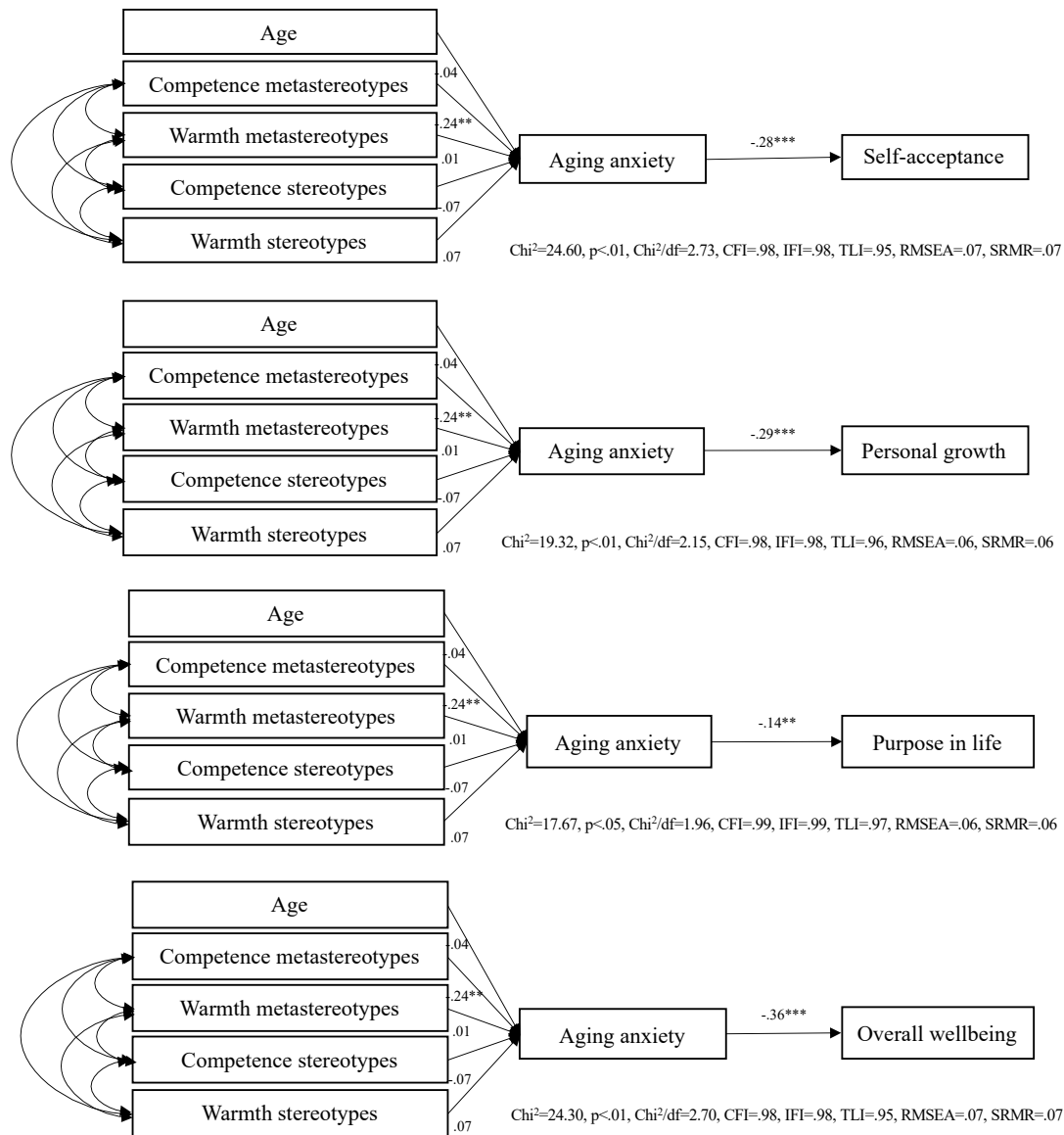


Figure 2. Final mediated models

In all of them, competence metastereotypes were associated with aging anxiety, which in turn was significantly related to wellbeing in its different facets. The more participants thought that young people saw older adults as competent, the less they experienced anxiety related to aging,

which in turn was associated with better psychological functioning. Neither stereotypes nor warmth metastereotypes were significantly associated with aging anxiety. The mediation bootstrap procedure confirmed that the indirect effect of competence metastereotypes, via aging anxiety, on the three dimensions and the overall score of wellbeing, was significant, as zero was not included in the 95% confidence interval (Table 3).

Table 3. Indirect effects

	95% Confidence Interval
Self-acceptance	.02; .14
Purpose in life	.02; .14
Personal growth	.01; .09
Overall wellbeing	.02; .16

Each model explained a small or satisfactory amount of variance of participants' psychological wellbeing (Self-acceptance 8%, Purpose in life 8%, Personal growth 2%, Overall wellbeing 13%).

4. Discussion

Through our study we aimed to examine not only the content of stereotypes and metastereotypes towards late middle-aged people in Italy, but also their associations with wellbeing through aging anxiety. First of all, in line with previous findings (Fasel et al., 2021), we observed that stereotypes and metastereotypes, although significantly correlated, were distinct concepts, which shared more variance with respect to the warmth rather than the competence dimension. Contrary to previous evidence (Vorauer et al., 1998; Fasel et al., 2021), we did not find that metastereotypes were more negatively connotated than stereotypes.

Although for all these variables participants' scores were around the midpoint of the scale, significant differences emerged between the warmth and the competence dimensions of both stereotypes and metastereotypes, which suggests that late middle-aged people were more likely to be seen (and to believe they were seen by young people) as friendly, true and sincere than skilful, capable and clever (Cuddy & Fiske, 2002).

In line with our first hypothesis, both stereotypes and metastereotypes were significantly associated with participants' wellbeing. Nevertheless, when stereotypes and metastereotypes were included in the same model, the picture changed, so that only competence metastereotypes emerged as significant indirect predictors of wellbeing; the more our participants thought that young people believed late middle-aged people to be competent, the greater their psychological functioning was, not only in general terms, but also with respect to personal growth and purpose in life. These findings suggest that believing that late middle-aged people can be seen by the youth as skilful, capable and clever might help them think they can develop as individuals and can set goals for their life. Contrary to our hypothesis, the competence stereotype was not associated with wellbeing in our models. In accord with the findings obtained by Fasel and colleagues (2021), beliefs about what young people think were more important than late middle-aged people's personal stereotypical ideas about their age group.

In line with our second hypothesis, both stereotypes and metastereotypes were significantly associated with aging anxiety. Again, when all of the variables were included in a more complex model, only competence metastereotypes presented a significant association with aging anxiety. In line with our third hypothesis, our findings suggested that reduced anxiety concerning the aging process is one of the psychological processes explaining the link between competence metastereotypes and late middle-aged people's wellbeing. Individuals who believe they could be described as incompetent are likely to react by developing feelings of fear towards the aging process, which could be seen as a path inevitably leading to a condition of inability in the eyes of others. Such a feeling of fear towards getting older is likely to make it more difficult for late middle-aged people to accept themselves as aging adults, to think they can keep on setting and achieving objectives in their life and develop themselves as individuals that can still grow up.

In line with our hypothesis, metastereotypical beliefs concerning competence were more important than those related to warmth for late middle-aged people's aging anxiety. When included in the same model as metastereotypes, stereotypical beliefs were not significant predictors of aging anxiety, supporting the idea that metastereotypes are more decisive than stereotypes in shaping people's feelings related to the aging process.

Our study contributed to the scarce literature about the role of stereotypes and metastereotypes in late middle-aged people's wellbeing. Notably, it was the first one examining the mechanisms through which age stereotypes and metastereotypes are linked with late middle-aged people's psychological functioning, highlighting the significant role of aging anxiety in such a relationship. Moreover, it clarified the different role of competence and warmth beliefs, highlighting that is the perception of being competent, rather than warm, in the eyes of others to have a role in shaping feelings of aging anxiety and wellbeing. Notably, differently from previous research using single-items to assess the variables of interest, we adopted more comprehensive measures that were proved to be valid and reliable, which makes us more confident in the robustness of our findings.

In spite of the numerous strengths of our research, we should acknowledge also some limitations. First, due to the correlational nature of our design, we could not establish causal relationships between variables. Future longitudinal studies could shed light on the nature of the relationship between beliefs concerning age, aging anxiety and wellbeing among older people. Second, the low reliability of some of the subscales we used to assess psychological wellbeing prevented us from considering the dimensions of autonomy, environmental mastery and relationships with others. This is a pity if we consider that these dimensions are particularly important for our target. Feeling autonomous, able to master one's surroundings and establishing positive social relationships are indeed key elements for active aging. Therefore, future research could aim to analyse the relationship between people's stereotypical and metastereotypical beliefs, anxiety about aging, and these dimensions of wellbeing, which could not be examined through the present study. Third, our study included participants aged 50-64. Future studies could examine potential differences in metastereotypes, aging anxiety and wellbeing in older people aged over 65.

5. Conclusions

Our findings provide an important point of reference for those wishing to design interventions to improve the wellbeing of adults in their fifties and sixties, given that our results suggest that one's belief to be seen as incompetent by other age groups might contribute to shaping concerns about aging with consequences on psychological wellbeing.

It would be useful to invest resources in promoting an image of aging people as capable, skilled, and able to do many things, rather than depicting them as individuals who have lost most of their skills. More importantly, such a view of late middle-aged and older people should be proposed and spread by young people. It might be particularly important to give voice and prominence to youth who describe late middle-aged and older people in positive terms, especially with respect to their abilities and competencies. Young people who do not describe the old age as a period of decline and fragility, but as a stage of life in which the individual can still do and accomplish many things, should be given space within the media, being featured for example in TV series or movies. In line with the "reframing aging" initiative, the contribution that aging people can give to society should be stressed in many ways, especially using young people as the source of this message, in order to build positive metastereotypes, counter ageism and contribute to developing policies and programs that help all of us move more successfully and peacefully through the life cycle. Local communities could foster positive perceptions of the competence possessed by middle-aged and older individuals through initiatives that facilitate the reciprocal exchange of expertise across different generations. This, on one hand, may allow younger members to appreciate the valuable contributions older individuals can make. Simultaneously, it empowers the older generation by rediscovering and affirming their intrinsic worth. Moreover, decision makers should promote spaces of action and participation for middle-aged and older people. Both individuals and communities could benefit from this. Since participation increases people's wellbeing and reduces loneliness and its negative consequences (e.g., Fliges et al., 2020; Morrow-Howell et al., 2003). At the same time, giving visibility to those initiative could reduce the spread of negative beliefs, stereotypes, and meta-stereotypes regarding aging.

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