



Changing Anxiety and Generativity Awareness: Based on a Survey in the COVID-19 Pandemic

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Abstract

This paper examines how generativity awareness and anxiety levels have changed among Japanese people aged 35 and older due to the societal impacts of COVID-19 and the rise of AI in workplaces. The research involved 1,000 participants and utilized surveys conducted during and after the pandemic. It identified four key aspects of generativity awareness: nurturing the next generation, personal growth, creativity, and a shift away from self-centred attitudes. The findings show that while self-anxiety decreases with age, anxiety about the next generation increases. There is also a significant relationship between generativity awareness and self-anxiety. The study highlights an increase in anxiety, especially among women, due to the pandemic.

Keywords: The Epigenetic Chart in Erikson's Theory, generativity awareness, anxiety, COVID-19

1. Introduction

In recent years, the world has faced significant turmoil due to climate change, which has induced widespread natural disasters globally. Additionally, Global Economic Prospects of a World Bank Group report projects the lowest five-year GDP growth rates by the end of 2024 in three decades (World Bank Group, 2024). The emergence of the COVID-19 pandemic in early 2020 caused a global cessation of activities. Although economic functions have since normalized, showing signs of recovery in areas such as consumer spending. Nevertheless, the altered lifestyles necessitated by the pandemic are unlikely to revert to their pre-pandemic states, with ongoing uncertainties including sluggish personal consumption growth and accelerating inflation. Generative AI introduced in 2022, will be poised to supplant numerous jobs, owing to rapid advancements in AI technology, thus radically altering the employment landscape. Increasingly, individuals feel dissatisfaction despite achieving success, exemplified by Ryukou Ono who after reaching the pinnacle of the IT industry, experienced unfulfilled feelings that never went away, leading him to radically alter his life course by ordaining as a priest under Hidemine Sasai, a prominent figure in the Indian Buddhist community (Ven. Surei Sasai Digital Archives, 2023). Driven by an unfulfilled sense of economic and personal

success, more individuals are grappling with existential insecurity and seeking purposeful engagement. This phenomenon is evident not only among older individuals who have attained societal success but also among younger executives.

Conversely, efforts are being made to address global challenges and bequeath a better society to future generations, with a contributory mindset. A 2023 survey targeting Japanese individuals from teenagers to those in their seventies revealed that awareness of the Sustainable Development Goals (SDGs) had surged to 91.6% from just 14.8% in the inaugural 2018 survey, indicating a universal recognition of these issues (Dentsu Team SDGs, 2023). In this age of living 100 years, a society where individuals can achieve better well-being—physically, mentally, and socially—is desired. The well-being of older individuals engaged in volunteer activities tends to increase (Howell et al., 2003). Moreover, an increase in the number of middle-aged and older people finding meaning in social contribution activities may not only enhance their own well-being but also the well-being of society at large (Gottlieb & Gillespie, 2010). Keyes reported that high social well-being is related to high generativity (Keyes, 1998). From the perspective of creating a better world and passing it on to the next generation, initiatives focused on generativity may be of great importance. Viewed from the standpoint of creating a better world and passing it on to the next generation, initiatives focused on intergenerational inheritance may hold significant importance.

This study aims to investigate the impact of escalating insecurity within an increasingly uncertain social milieu on individuals' generativity. Specifically, it will analyze the evolution of generativity awareness among individuals in the context of significant global changes post the COVID-19 pandemic.

2. Recent researches

The concept of 'generativity' was originally defined by Erikson in 1950 as an interest in nurturing and leading the next generation. This definition was later expanded by Erikson in 1982 to encompass broader contributions to subsequent generations, such as cultural and artistic creation, social volunteering, environmental conservation, and imparting knowledge through diverse personal experiences. Building on this, Schoklitsch and Baumann in 2012 emphasized that these aspects of generational inheritance vary with age, a view supported by subsequent research by Stewart & Vandewater (1998) and McAdams et al. (1993), which found that commitment to generational concerns tends to increase among middle-aged and older groups and decrease among younger populations.

Continuing this line of inquiry, Villar et al. in 2021 explored the broader applicability of generativity among older adults, suggesting that it plays a key role in enhancing their potential and resources, and specifically focusing on addressing the lesser-studied negative aspects of generativity to provide a more comprehensive perspective. On the other hand, Lawford et al. in 2017 argued for the importance of studying generativity from early developmental stages to gain a fuller understanding of its evolution across the lifespan.

In the analysis of socio-psychological aspects, research by Keith et al. in 2010 showed that in middle-aged adults, generativity correlates more with positive social engagement than with personality traits, with higher generativity associated with traits like extraversion and openness. Becchetti and Bellucci in 2021 found that active engagement in generative activities, both in leisure and work, significantly boosts subjective well-being, though they noted a

decline in generativity when individuals perceived a high degree of control over their outcomes.

Based on the preceding research, this study investigates the impact of the COVID-19 pandemic on generativity, specifically examining how restrictions on behaviours and reduced social participation affected both self-anxiety and anxiety about the next generation. This research aims to extend the existing understanding of how generative concerns are influenced by large-scale societal changes.

3. Methods

A questionnaire survey was conducted based on Erikson's concept of generativity, focusing on individuals in mid- to late-adulthood. The survey targeted both men and women aged 35 and older, with a total of 1,000 respondents recruited from Cross Marketing Inc.'s panel of over 10 million individuals. The sample was evenly divided by gender and age. The surveys were administered on two occasions: initially during the early phase of the COVID-19 pandemic and subsequently towards the end of the pandemic, just prior to the transition to category 5.

3.1 First survey

Survey participants: 1000 adults aged 35 years and above (500 men and 500 women, mean age 57.02 years, standard deviation 13.098, age range 35-91 years)

Survey period: From Friday, May 28, 2021, to Sunday, June 6, 2021

Survey conducted by: Cross Marketing

3.2 Second survey

Survey participants: 1000 adults aged 35 years and above (500 men and 500 women, mean age 57.09 years, standard deviation 13.104, age range 35-90 years)

Survey period: From Monday, March 20, 2023, to Thursday, March 23, 2023

Survey conducted by: Cross Marketing

3.3 Survey items

The survey conducted in this study comprised three questionnaire items: basic attributes, generativity scale, and sense of insecurity. For basic attributes, respondents were asked about their gender, age, province, region, household income, personal income, occupation, family structure, highest level of education attained, and interaction status. Generativity is frequently assessed using Erikson's stages of psychosocial development. However, in this study, we utilized Kushizaki's scale, which is based on the works of Erikson, McAdams et al., and others, to measure generativity from multiple perspectives (Erikson, 1982; Kushizaki, 2005; McAdams et al., 1993). Therefore, for the generativity scale in this study, the 25 items proposed by Kushizaki were used (Kushizaki, 2005).

Two questions were designed to gauge feelings of insecurity. The first question addressed respondents' 'anxiety about their own future' (hereinafter referred to as 'self-anxiety'), and the second addressed 'anxiety when contemplating the society in which the next generation will live' (hereinafter referred to as 'next-generation anxiety'). Respondents were asked to rate their responses using the following 5-point Likert scale: 1. Not applicable, 2. Not very applicable, 3. Neither applicable nor inapplicable, 4. Somewhat applicable, 5. Applicable.

4. Generativity constructs

McAdams and Aubin conceptualized generativity across five dimensions (McAdams & Aubin, 1992): care and responsibility for others, transfer of knowledge and skills, contributions to neighbors and society, memorable achievements, and creativity and productivity. This scale, proposed by Kushizaki, was designed with a four-factor structure comprising 25 items: 'interest in creating and nurturing', 'generational sense of inheritance', 'self-growth and fulfilment', and 'de-self-centred attitude' (Kushizaki, 2005).

Isada et al. further refined the generativity scale, identifying a five-factor structure that includes 'interest in creating and nurturing', 'self-growth and fulfilment', 'thirst for creativity', 'de-self-centred attitude', and 'sense of generativity', using Kushizaki's scale items (Isada et al., 2023). Factor analysis in this study was conducted using the maximum likelihood method and promax rotation on the same scale items. During the first survey, the factor loadings for the item 'I pass on my knowledge, skills, and experience to younger people' registered low at 0.299. Consequently, this item was removed, and the factor analysis was conducted again.

The determination of factors was based on eigenvalues of at least one, with additional consideration given to screen plots and plausible interpretations.

Table 1 presents the pattern matrix of the final factor analysis results from the first survey, whereas Table 2 displays the pattern matrix from the second survey. Additionally, Tables 3 and 4 present descriptive statistics for each of these factors.

Table 1 Results of the factor analysis of the first survey

No	Items	1	2	3	4	communality	confidence
14	I want to do something useful for the future society for my children	0.767	-0.088	-0.010	0.030	0.54	0.868
20	I feel a responsibility to contribute to society as an adult	0.740	-0.085	0.018	0.089	0.518	
4	Thinking about what I can do for the next generation	0.710	-0.045	0.097	0.046	0.561	
1	I want to help others grow	0.671	-0.041	0.125	0.057	0.531	
10	I think that children are a gift from society	0.626	-0.093	-0.067	0.017	0.32	
9	I don't care how young people live their lives*	0.603	0.073	-0.227	0.194	0.35	
24	I try to be a model for others younger than me	0.544	0.119	0.132	-0.121	0.479	
7	I believe that children are a way to pass on the life given to us by our ancestors to our descendants	0.543	-0.029	-0.085	-0.122	0.266	
13	I would be happy if there was someone who could take over and develop what I have done	0.480	0.084	0.181	-0.221	0.48	
19	I want someone else to carry on what I have done after I retire	0.479	0.087	0.087	-0.286	0.427	
8	I feel like I haven't grown since I was young*	0.011	0.738	0.086	-0.015	0.563	0.79
12	I feel guilty that I have not done what I should have done as an adult*	-0.266	0.713	0.115	0.019	0.46	
21	I feel like no one needs me*	0.186	0.633	-0.047	0.027	0.511	
17	I have done little to benefit the world*	0.216	0.629	0.054	-0.002	0.55	
3	I feel that I am not good enough at what I am doing now*	-0.127	0.622	-0.194	0.003	0.399	
15	I feel like I am not fulfilling my true potential*	-0.066	0.385	-0.296	0.135	0.31	
23	I want to do original work or activities	-0.064	-0.037	0.867	0.077	0.65	0.795
11	I want to do unique work or activities that only I can do	0.046	-0.045	0.790	0.092	0.616	
6	Striving to create new ideas, plans, works of art, etc.	0.182	0.124	0.569	0.034	0.501	
25	Feel ungrateful if my children or subordinates do not do what I say*	-0.071	0.033	0.105	0.692	0.461	0.645
2	I want to make my children or subordinates do what I want them to do*	-0.109	-0.017	0.057	0.652	0.415	
16	I sometimes impose my own way of doing things on others*	-0.198	0.081	0.126	0.463	0.243	
5	You don't want to work hard for others if you don't get anything in return*	0.380	0.069	-0.021	0.447	0.351	
22	I do not want to be on the margins*	0.289	-0.058	-0.060	0.383	0.187	

(Factor extraction method: maximum likelihood; rotation method: promax rotation. Items marked with * are inverted).

Table 2 Results of the factor analysis of the second survey

No	Items	1	2	3	4	communality	confidence
1	I want to help others grow	0.802	-0.092	0.032	0.026	0.608	0.879
14	I want to do something useful for the future society for my children	0.769	-0.147	0.069	0.145	0.519	
20	I feel a responsibility to contribute to society as an adult	0.740	-0.090	0.093	0.039	0.567	
4	Thinking about what I can do for the next generation	0.734	-0.006	0.073	0.010	0.598	
7	I believe that children are a way to pass on the life given to us by our ancestors to our descendants	0.659	-0.189	-0.124	-0.037	0.31	
10	I think that children are a gift from society	0.657	-0.190	-0.065	0.124	0.291	
9	I don't care how young people live their lives*	0.589	0.161	-0.144	0.128	0.346	
13	I would be happy if there was someone who could take over and develop what I have done	0.535	0.079	-0.002	-0.303	0.527	
5	You don't want to work hard for others if you don't get anything in return*	0.511	0.185	-0.080	0.451	0.411	
19	I want someone else to carry on what I have done after I retire	0.407	0.110	0.015	-0.407	0.505	
24	I try to be a model for others younger than me	0.373	0.148	0.181	-0.246	0.495	0.782
18	I pass on my knowledge, skills, and experience to younger people	0.351	0.272	0.162	-0.223	0.52	
12	I feel guilty that I have not done what I should have done as an adult*	-0.277	0.741	0.030	0.077	0.481	
8	I feel like I haven't grown since I was young*	-0.063	0.693	0.167	0.068	0.505	
21	I feel like no one needs me*	0.148	0.640	-0.002	0.128	0.516	
3	I feel that I am not good enough at what I am doing now*	-0.235	0.637	-0.158	0.045	0.393	
17	I have done little to benefit the world*	0.228	0.581	0.022	-0.017	0.51	0.813
15	I feel like I am not fulfilling my true potential*	-0.091	0.501	-0.355	0.030	0.34	
23	I want to do original work or activities	-0.069	-0.073	0.951	0.141	0.707	
11	I want to do unique work or activities that only I can do	-0.008	-0.061	0.861	0.083	0.653	0.625
6	Striving to create new ideas, plans, works of art, etc.	0.153	0.133	0.559	-0.057	0.538	
2	I want to make my children or subordinates do what I want them to do*	0.020	0.007	0.076	0.721	0.462	
25	Feel ungrateful if my children or subordinates do not do what I say*	0.047	0.125	0.065	0.633	0.376	
16	I sometimes impose my own way of doing things on others*	-0.144	0.160	0.161	0.515	0.272	
22	I do not want to be on the margins*	0.305	0.088	-0.126	0.338	0.177	

(Factor extraction method: maximum likelihood; rotation method: promax rotation. Items marked with * are inverted).

Table 3 Descriptive statistics of factors of the first survey

Factor	Frequency	Minimum	Maximum	Mean
Nurturing and passing on the next generation	1000	1	5	3.1275
Self-growth and fulfilment	1000	1	5	3.106
Thirst for creativity	1000	1	5	2.9053
De-self-centred attitude	1000	1	5	3.5754
Generativity	1000	1.4	4.76	3.1747

Table 4 Descriptive statistics of factors of the second survey

Factor	Frequency	Minimum	Maximum	Mean
Nurturing and passing on the next generation	1000	1	5	3.0628
Self-growth and fulfilment	1000	1	5	3.1567
Thirst for creativity	1000	1	5	2.7777
De-self-centred attitude	1000	1	5	3.6595
Generativity	1000	1.16	4.8	3.1466

5. Analysis of anxiety and generativity awareness

The correlation between generativity awareness, its subscales, and anxiety was examined, with results displayed in Tables 5 and 6. There is a negative correlation between self-anxiety and generativity awareness, and a positive correlation with next-generation anxiety. Examining the subscales of generativity, negative correlations were observed for all subscales except for 'de-self-centred attitude' in relation to self-anxiety. Additionally, no correlation was observed for 'thirst for creativity' in women. Regarding gender, the correlation for men was similar to

that observed in the entire group, but additionally, a negative correlation was noted for 'de-self-centred attitude'. For women, a positive correlation was observed solely for 'nurturing and passing on the next generation'.

Table 5 Correlations between generativity subscales and anxiety in the first survey

self-anxiety		Generativity subscale□				Total
		Nurturing and passing on the next generation	Self-growth and fulfilment	Thirst for creativity	De-self-centred attitudes	
Sex	Male	-0.122**	-0.463**	0.02	-0.161**	-0.29**
	Female	-0.288**	-0.471**	-0.124**	-0.194**	-0.443**
Total		-0.206**	-0.467**	-0.067*	-0.166**	-0.369**
next-generation anxiety		Generativity subscale□				Total
		Nurturing and passing on the next generation	Self-growth and fulfilment	Thirst for creativity	De-self-centred attitudes	
Sex	Male	0.234**	-0.179**	0.052	-0.055	0.083
	Female	0.25**	-0.031	0.125**	0.07	0.189**
Total		0.23**	-0.111**	0.062*	0.014	0.120**

** Correlation coefficient is significant (two-sided) at the 1% level.

Table 6 Correlations between generativity subscales and anxiety in the second survey

self-anxiety		Generativity subscale□				Total
		Nurturing and passing on the next generation	Self-growth and fulfilment	Thirst for creativity	De-self-centred attitudes	
Sex	Male	-0.249**	-0.445**	-0.161**	-0.073	-0.383**
	Female	-0.168**	-0.428**	-0.078	-0.059	-0.315**
Total		-0.212**	-0.436**	-0.126**	-0.061	-0.352**
next-generation anxiety		Generativity subscale□				Total
		Nurturing and passing on the next generation	Self-growth and fulfilment	Thirst for creativity	De-self-centred attitudes	
Sex	Male	0.252**	-0.127**	0.078	-0.116**	0.118**
	Female	0.229**	-0.033	0.049	0.028	0.161**
Total		0.237**	-0.081**	0.052	-0.037	0.135**

** Correlation coefficient is significant (two-sided) at the 1% level.

For men, it could be argued that prioritizing the attainment of sufficient self-growth and accomplishment, along with satisfying their egos, is crucial. Once these needs are met, they are more inclined to shift their focus towards the well-being and prospects of the next generation.

Figures 1 to 4 illustrate the generational changes in anxiety and generativity awareness between the first and second surveys, segregated by gender. Across all cases, self-anxiety decreased with increasing age, while next-generation anxiety slightly increased, and generativity tended to rise as well. Each survey examined the correlation between generativity and anxiety by age and gender, with the results displayed in Table 7. In the first survey, women exhibited a negative correlation between self-anxiety and generativity at all ages up to their 60s, whereas a negative correlation was observed for men in the 45-49, 55-59, 65-69, and 75+ age groups. Conversely, positive correlations between next-generation anxiety and generativity were found only for men aged 35 to 39 and 70 to 74, and for women aged 40 to 54. It can be inferred that reducing self-anxiety increases generativity awareness as individuals begin to focus on nurturing and passing on to the next generation.

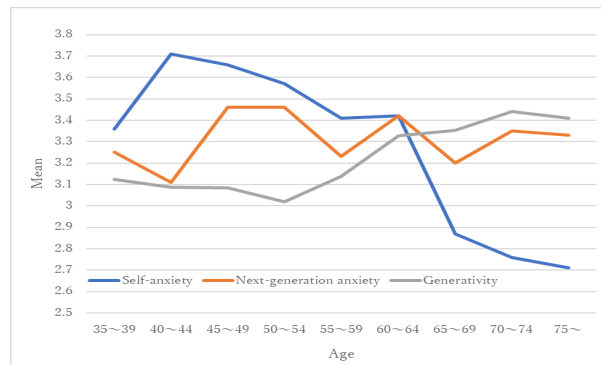


Fig. 1 Mean change in man generativity and anxiety in the first survey

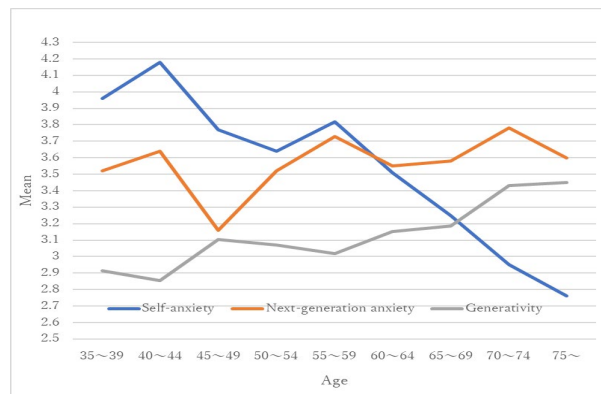


Fig. 2 Mean change in woman generativity and anxiety in the first survey

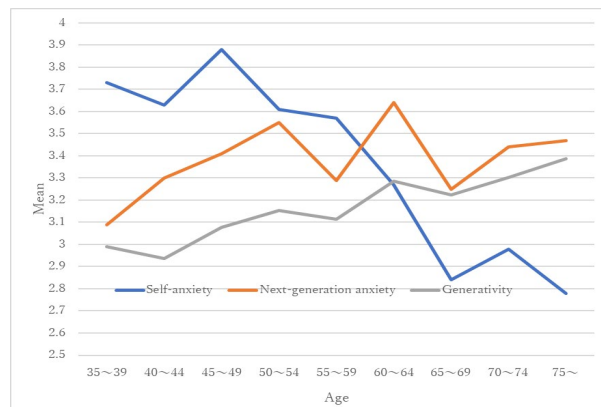


Fig. 3 Mean change in man generativity and anxiety in the second survey

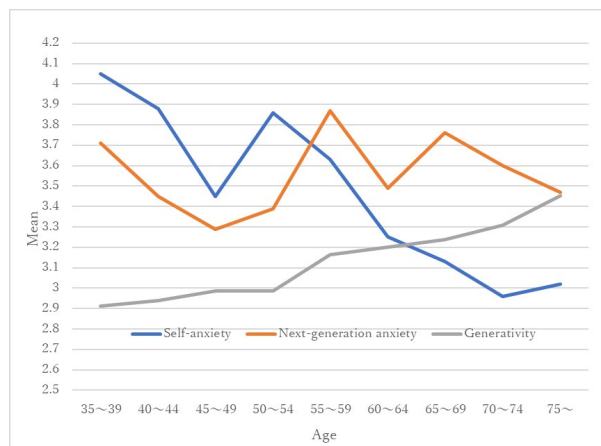


Fig. 4 Mean change in woman generativity and anxiety in the second survey

Table 7 the correlation of generativity and anxiety for age and gender

Sex	Age	The first survey		The second survey	
		self-anxiety	next-generation anxiety	self-anxiety	next-generation anxiety
Male	35～39	-0.262	0.285*	-.584**	0.047
	40～44	-0.248	0.225	-.422**	0.049
	45～49	-0.283*	-0.147	-0.255	0.24
	50～54	0.024	0.261	-.325*	.281*
	55～59	-0.453**	-0.159	-0.259	0.245
	60～64	-0.081	0.188	-.470**	0.059
	65～69	-0.421**	-0.118	-0.174	-0.014
	70～74	-0.062	0.334*	-.512**	-0.183
	75歳～	-0.269*	-0.163	-0.101	0.108
Female	35～39	-0.476**	0.137	-0.158	0.13
	40～44	-0.420**	0.302*	-0.227	.334*
	45～49	-0.388**	0.469**	-0.147	0.186
	50～54	-0.512**	0.303*	-.340*	0.244
	55～59	-0.315*	-0.052	-.385**	.279*
	60～64	-0.342*	0.052	-0.026	0.12
	65～69	-0.367**	0.223	-.312*	-0.087
	70～74	-0.245	0.023	-.421**	0.152
	75～	-0.053	0.189	-0.17	0.101
** Correlation coefficient is significant (two-sided) at the 1% level.					
* Correlation coefficient is significant (two-sided) at the 5% level.					

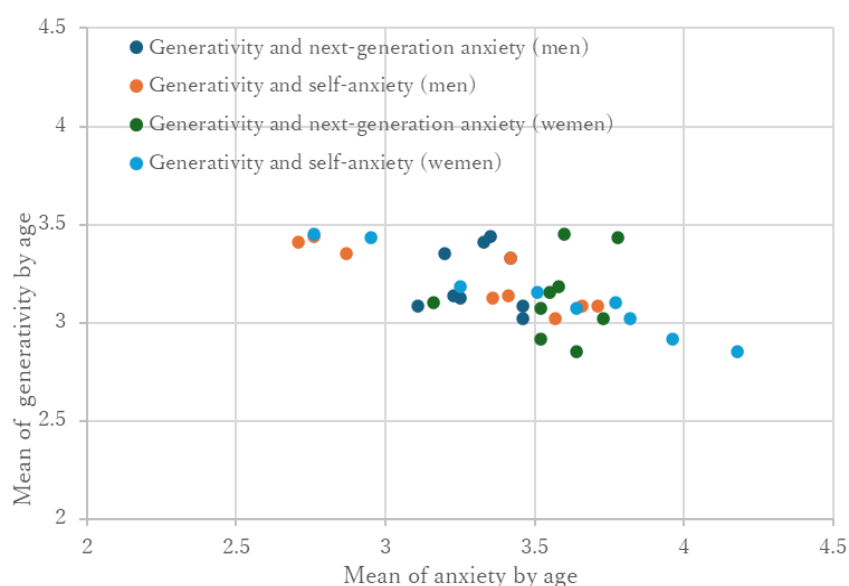


Fig. 5 Correlation diagram of anxiety and generativity in first survey

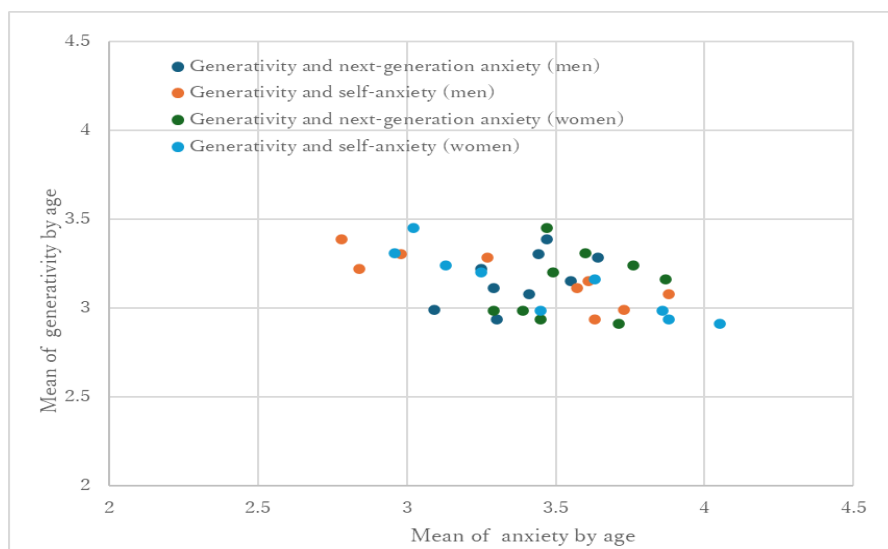


Fig. 6 Correlation diagram of anxiety and generativity in second survey

Figures 5 and 6 illustrate the correlation between mean generativity and mean anxiety across various age groups. Figure 5 presents the results from the first survey, while Figure 6 displays the results from the second survey. In both surveys, there is a discernible trend indicating that as self-anxiety increases, generativity awareness tends to decrease for both men and women. However, no clear relationship is observed between generativity awareness and next-generation anxiety.

Table 8 Result of t-test of differences in means of subscales by survey year

generativity subscale	mean		t-ratio	degree of freedom	p-value
	2021	2022			
Nurturing and passing on the next generation	3.1275	3.0628	2.085	1998	.019*
Self-growth and fulfilment	3.106	3.1567	-1.510	1998	.066
Thirst for creativity	2.9053	2.7777	3.118	1998	< .001*
De-self-centred attitudes	3.5754	3.6595	2.87	1991.5	.002*
generativity	3.1747	3.1466	1.306	1998	.096

*There is a significant difference (significance level 5%).

For consider the time-series changes in anxiety and generativity attitudes, the analysis will examine how self-anxiety, next-generation anxiety, and generativity changed between the first and second surveys.

Assuming the null hypothesis that there is no difference between the means of self-anxiety, a t-test at a 5% significance level was used to analyze changes in self-anxiety, next-generation anxiety, and generativity subscales between the first and second surveys. Table 8 displays the results of the t-test for generativity subscales by survey year. Significant differences were observed in 'nurturing and passing on the next generation', 'thirst for creativity', and 'de-self-centred attitude'. During the middle of the COVID-19 pandemic, levels of 'nurturing and passing on the next generation' and 'thirst for creativity' were higher. However, 'de-self-centred attitude' was higher at the end of the COVID-19 pandemic. Since the first survey was conducted during the COVID-19 pandemic, it is possible that the desire to nurture and pass on to the next generation was intensified by the presence of illness and death, along with numerous restrictions in daily life and a general sense of stagnation, enhancing the 'thirst

for creativity'. Conversely, the 'de-self-centred attitude' was lower, indicating a possible increase in self-centered behavior in a restrictive environment.

Table 9 Result of multivariate analysis of variance of survey year and sex

	2021		2022		F-score for main effect		F-score for interaction
	Average for Male	Average for Female	Average for Male	Average for Female	Survey year	Sex	
Nurturing and passing on the next generation	3.180	3.074	3.086	3.039	4.360*	6.096*	0.947
Self-growth and fulfilment	3.133	3.078	3.163	3.150	2.278	1.006	0.391
Thirst for creativity	3.072	2.738	2.906	2.649	9.976*	53.264*	0.899
De-self-centred attitudes	3.522	3.628	3.584	3.734	8.312*	19.134*	0.590
generativity	3.219	3.130	3.162	3.130	1.712	7.964*	—
self anxiety	3.280	3.540	3.370	3.470	0.034	11.441*	2.163
next-generation anxiety	3.310	3.560	3.380	3.560	0.453	19.242*	0.570
*There is a significant difference (significance level 5%).							

Further examining the differences by gender during and at the end of the COVID-19 pandemic, and assuming equal variance-covariance matrices across all groups, a multivariate analysis of variance at a 5% significance level was conducted. This analysis aimed to identify differences in anxiety, generativity, and their subscales, segmented by study period and gender. Table 9 shows the results of the multivariate analysis of variance. No interaction effects were observed between survey period and gender. However, significant differences were noted for both survey period and gender in 'nurturing and passing on the next generation', 'thirst for creativity', and 'de-self-centred attitude'. Differences were also noted in overall generativity awareness by gender. For men, 'nurturing and passing on the next generation' and 'thirst for creativity' were higher. However, 'de-self-centred attitude' was higher among women. This trend was consistent from the middle to the end of the COVID-19 pandemic. Both self-anxiety and next-generation anxiety were higher in women during both the middle and the end of the pandemic. Self-anxiety slightly decreased among women with the end of the pandemic, while it slightly increased further in men. Next-generation anxiety showed no change in women but tended to increase in men.

6. Dedicated recommendations

In the face of death or in a restricted environment such as the COVID-19 pandemic, the phenomena of 'nurturing and passing on the next generation' and 'thirst for creativity' were observed to increase. Conversely, 'de-self-centred attitude' were also noted among individuals. To ensure that 'nurturing and passing on the next generation' and 'thirst for creativity' continue to grow, and that people maintain their relationships with less self-centred attitudes, without the influence of crisis situations such as the COVID-19 pandemic, it is essential to establish a system that perpetually supports the local community nurtured during the pandemic. Organising events for intergenerational exchange and regularly holding workshops and seminars to raise awareness are crucial.

Increased self-anxiety may act as a deterrent to raising generativity awareness. During the COVID-19 pandemic, self-anxiety was notably higher among women. To prevent the spread of social insecurity, it may be necessary to enhance policies aimed at ensuring economic stability. Additionally, providing opportunities for re-education and skills development, along with support for mental health care, is vital to preventing the proliferation of self-insecurity.

For men, the COVID-19 pandemic may have heightened awareness of the importance of generativity. To ensure this awareness permeates society in the future, measures to encourage

the active participation of men in the local community will be necessary. It is essential to create conditions that facilitate men's involvement, such as activities that utilise their abilities and encourage family participation. Initiatives that promote male participation during holidays and through online platforms may also be effective. Establishing a system to assess the value of men's contributions to the community could further incentivise their involvement.

7. Conclusions

This study explores the relationship between generativity awareness and anxiety amid societal upheavals such as the COVID-19 pandemic. Using factor analysis, the structure of Japanese attitudes toward generativity was found to include four factors: 'nurturing and passing on the next generation', 'self-growth and fulfilment', 'thirst for creativity', and 'de-self-centred attitude'.

It was observed that self-anxiety tends to decrease with age, while next-generation anxiety and generational awareness tend to increase. Younger generations often prioritize self-improvement, which leads to heightened anxiety about their own futures and can hinder their focus on others. This self-centered tendency, especially pronounced among men, may be influenced by societal divisions of labor and their awareness of immediate surroundings.

Surveys conducted during and after the COVID-19 pandemic revealed significant differences in generativity awareness sub-scales. The constraints of the pandemic, including illness and mortality, likely intensified the desire to nurture future generations and foster creativity. Conversely, there was a decline in de-self-oriented attitudes, possibly reflecting a shift toward prioritizing self-fulfillment due to behavioral restrictions. These trends were more pronounced among women, who also tended to experience higher levels of anxiety.

Self-anxiety tended to decrease generativity awareness, whereas next-generation anxiety tended to increase it. Regarding men, there was no correlation between next-generation anxiety and generativity awareness during the pandemic, but a positive correlation was observed post-pandemic. The COVID-19 pandemic significantly heightened anxiety levels, particularly among women, thereby impacting their generativity awareness. For men, however, the post-pandemic period may have provided an opportunity to reflect more deeply on both their own and next-generation anxiety.

Even post-pandemic, women's self-anxiety remained unresolved, and they continued to experience high levels of self-anxiety, underscoring the importance of policies aimed at reducing self-anxiety to enhance generativity awareness. Following the COVID-19 pandemic, the sub-scales of generativity awareness—'nurturing and passing on the next generation' and 'thirst for creativity'—declined, while 'de-self-centred attitude' increased. This highlights the importance of fostering a society that remains focused on nurturing the next generation and encouraging creativity, even amid significant social constraints. Given the persistent instability in social conditions and the prevalence of events that heighten insecurity, this report underscores the necessity of better understanding how crises impact generativity awareness and addressing insecurity to cultivate a more resilient and positive society. Further research is required to identify which aspects of sociopsychological trends are effective in enhancing generativity awareness and to assess the impact of community and cross-generational support on generativity awareness.

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