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Coping with Payment Barriers of Elderly Care Robots: An Intergenerational Solidarity Perspective

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Abstract: Drawing on Intergenerational Solidarity Theory, this paper systematically reviews literature on payment mechanisms for smart health and elderly care robots and arrives at three core conclusions. First, primary payers have shifted from elderly end users to adult offspring, among which daughters are the dominant paying group. Second, purchase intention is affected by the combined effects of functional perceived value, elderly digital literacy and multi-dimensional intergenerational solidarity. Third, diversified cost-sharing approaches can be developed via tiered pricing, targeted government subsidies and coordinated connections with long-term care insurance. At its root, the payment bottleneck is not only a matter of insufficient household income, but reflects structural misalignment in intergenerational care responsibility allocation: the elderly lack payment capability, while adult offspring have stable purchasing power and need multi-level incentives to turn potential purchase willingness into real consumption.

1. Elderly care robots encounter prominent payment barriers in market promotion stage

China is experiencing unprecedentedly rapid and large-scale population aging. Gradually moving beyond the feature of “aging before affluence,” the country has entered a stage of moderate deep aging, placing growing supply pressure on home-based elderly care services. According to the 2023 Statistical Bulletin on National Economic and Social Development issued by the National Bureau of Statistics, by the end of 2023, China’s population aged 60 and above hit 296.97 million, accounting for 21.1% of the national total population, which signals that China has fully stepped into the moderate aging society [1]. Technological innovation and scenario-oriented implementation of smart health and elderly care robots provide a feasible supplementary path to compensate for the insufficient capacity of conventional elderly care services amid structural supply–demand imbalance. However, sustainable industrial cultivation and widespread market adoption of intelligent aging equipment are restricted by inherent structural barriers: unclear responsible payers, incomplete supporting payment systems, and ambiguous institutional rules governing cost sharing.

1.1 Elderly individuals have low financial capacity to be responsible payers

China's pension replacement rate presents a continuous downward trend. As of 2024, the actual pension replacement rate for enterprise employees relative to their pre-retirement salaries stood at roughly 45%[2], which restricts elderly groups from bearing the recurring service charges of smart health and elderly care robots. Second, national long-term care insurance pilots maintain narrow coverage scope; their reimbursement catalogs mainly center on manual basic nursing services, while intelligent rehabilitation equipment is rarely included[3]. In the meantime, the domestic commercial pension insurance market remains immature, with product design prioritizing wealth appreciation over elderly care consumption compensation. The elderly are universally trapped in an income ceiling constraint, manifested by rigid consumption structures and a high share of medical spending in total household expenditure. Relevant empirical data demonstrates that around 82.5% of senior citizens only accept a monthly payment cap of no more than 1,000 RMB[4]; accordingly, their purchase intention toward robot devices priced at tens of thousands or even over 100,000 RMB remains extremely weak.

1.2 Supporting payment barriers constrain the elderly's acceptance

Three types of barriers constrain the elderly's acceptance and dampen their payment intention: operational adaptation barriers, affective solidarity barriers, affective solidarity barriers, and privacy trust barriers. A large share of seniors cannot independently operate smartphones and other intelligent terminals, create prominent technology anxiety and form a core threshold blocking their acceptance of smart health and elderly care equipment. field investigations carried out by Zhongnan University of Economics and Law in offline retail outlets across Wuhan, Zhengzhou and Changsha show that 65% of elderly interviewees hold the opinion that robots lack human emotional warmth. Manufacturers devote the majority of R&D resources to quantifiable practical functions such as vital sign monitoring and fall risk alerts, while insufficient attention is paid to soft interactive experience oriented toward emotional companionship. Consequently, these robotic products struggle to build affective resonance that satisfies the inner emotional needs of the elderly. generational disparities in values and cognition lead the elderly to hold low inherent trust in smart health and elderly care rehabilitation assistive devices, accompanied by persistent worries over equipment operational safety and personal data privacy leakage. In addition, their inherently conservative consumption mindset slows the formation of stable trust in emerging intelligent technologies.

1.3 Ambiguous rules for cost sharing classified by categories

The smart health and elderly care robot industry remains in the stage of pilot popularization and iterative product testing, and the absence of unified graded classification standard system leads to the lack of comparable price-function reference benchmarks across heterogeneous robot equipment with diverse forms and functional configurations circulating in the market. Faced with a heterogeneous product matrix covering lightweight desktop companion robots, humanoid all-scenario service robots, single-function health monitoring terminals and integrated multi-scenario nursing systems, intergenerational family decision-makers cannot accurately judge whether such intelligent devices can match the differentiated aging demands of their elderly parents. Severe market information asymmetry suppresses final consumption decisions and triggers widespread purchase hesitation or complete abandonment of consumption intention, forming a typical consumer decision-making paradox: consumers worry that high-priced equipment contains redundant functional modules mismatched with household care demands, while low-cost devices fail to satisfy core safety monitoring and daily nursing requirements.[5]

2. Consumption for elderly care robots presents a prominent intergenerational effect

2.1 The intergenerational bridging role of Generation Z

Born between 1995 and 2009, Generation Z are native digital natives who have grown up together with the internet, endowed with innate affinity for emerging technologies and high technological receptivity. Their purchase intention is motivated by three core drivers: emotional compensation for insufficient intergenerational companionship, inherent techno-optimism, and forward-looking risk prevention planning for household aging arrangements[6]. Based on Intergenerational Solidarity Theory, Generation Z constructs a full-process intergenerational transmission chain covering cognition and consumption: information acquisition—purchase intention—family payment.

First, Generation Z acts as technology interpreters to break cognitive barriers. They master diversified emerging information channels including social media platforms, professional technology comment columns and vertical interest communities, allowing them to efficiently collect core data involving functional parameters of smart health and elderly care equipment, scenario-adapted matching schemes and safety performance test assessments. Relying on such information, they screen out intelligent devices that fit the real care demands of their elderly parents, feature user-friendly age-adaptive operation logic and deliver balanced cost-performance value. Second, they undertake the mission of delivering digital reverse mentoring to tackle usage difficulties. Via on-site offline operation tutoring or long-distance remote technical debugging, Generation Z assists seniors in equipment installation, system configuration and daily function manipulation, which mitigates the elderly's technology anxiety and unfamiliarity with digital products, and converts abstract product cognition into practical operational capabilities. Lastly, they serve as core family collective payers to break payment obstacles. After finishing cognitive popularization and digital competence training for the elderly, Generation Z integrates multiple household financial resources including dedicated family aging care accounts, government consumption coupons and enterprise hardware subsidies to complete joint household consumption decisions, and supplies sustained post-purchase technical troubleshooting and maintenance services over the whole service lifecycle of the equipment.

Relying on multi-dimensional intergenerational solidarity collaboration within a unified household aging decision-making framework, this full-cycle transmission pathway systematically eliminates the triple constraints of cognitive barriers, usage difficulties and payment obstacles that hinder the market popularization of smart health and elderly care robots. Therefore, Generation Z evolves into the core driving group accelerating the market penetration of intelligent aging rehabilitation assistive devices.

2.2 Adult Offspring: The Actual Payers for Elderly Care Robots

Yuan Yujia (2024) as well as Hu Yangming & Yuan Yujia (2024) redirected their research lens from senior end users to their adult offspring and reached a core empirical conclusion: adult offspring generally hold strong purchase intention toward smart health and elderly care services. Specifically, 60% of child respondents accept a monthly expenditure range of 500–1,500 RMB, and another 28.6% are ready to spend over 1,500 RMB each month; their overall willingness to consume is more than tenfold that of the elderly group[7,8]. Even though their research centers on smart aging care services, its core inference that adult offspring constitute the real main subjects of payment responsibility delivers vital reference value for tackling payment obstacles faced by smart health and elderly care robots. As demonstrated by Wei Yan & Zeng Zhuoyu (2026), adult offspring undertake two intertwined roles within smart aging service scenarios under the framework of Intergenerational Solidarity Theory:

First adult offspring deliver digital reverse mentoring to resolve usage difficulties. Empirical evidence verifies that intergenerational technical support acts as a pivotal driving factor enabling

smart health and elderly care products to shift from passive acceptance to real consumption behavior. By means of on-site offline guidance or long-distance remote technical support, adult offspring assist their elderly parents in manipulating intelligent terminals and analyzing health monitoring data, which substantially relieves seniors' technology anxiety toward digital intelligent products and eliminates their barriers to digital inclusion. The research further puts forward targeted suggestions for smart aging service platforms to embed a dedicated remote auxiliary module for family children, so as to reinforce the technical support function embedded in intergenerational solidarity.

Second, adult offspring act as financial supporters who embody functional solidarity within family intergenerational bonds. Relevant evidence illustrates that as traditional in-home family care capacities gradually decline, adult offspring choose to fulfill their normative solidarity obligations by purchasing market-oriented technology-backed alternative care services. Children’s purchase intention mirrors the transformation in the realization of intergenerational accountability: shifting from in-person daily companionship to the procurement of professional aging services. Quantitative survey data prove that daughters'purchase intention reaches 2.38 times that of sons[9].

2.3 Female adult offspring are more likely to be the primary payers for geriatric care robots

Wei Yan and Zeng Zhuoyu (2026) carried out an empirical analysis grounded on 949 valid questionnaires distributed among rural adult offspring in Shanxi, Anhui and Henan Provinces, which refined the classification of main subjects of payment responsibility down to a finer-grained dimension. Their empirical results reveal that rural daughters' purchase intention stands 2.38 times higher than that of rural sons. Such gender divergence is especially salient in families with elderly members aged 70 to 79 and households where seniors possess low educational levels[9].

In-depth qualitative interviews conducted in the same research further unpack the internal logical mechanism behind such differentiated consumption tendencies. Daughters’ purchase intention mainly originates from their intimate affectual solidarity with parents, as well as psychological anxiety triggered by the incapacity to deliver round-the-clock in-person care. To mitigate the inner guilt brought by geographic separation, they tend to procure smart aging services and regard technological alternative care as a vital carrier of emotional comfort. By comparison, sons' consumption judgments follow a more rational logic, and their purchase intention is mainly determined by comprehensive evaluation of the practical nursing value of intelligent equipment. Field research data from Zhongnan University of Economics and Law demonstrate that intergenerational family decision-makers, as the primary payers, attach greater importance to the safety early-warning and real-time monitoring functions of smart health and elderly care robots. In contrast, elderly end users prioritize interactive modules for emotional companionship. Such heterogeneous demand mismatch between generations manifests more prominently within parent-daughter relational bonds[9].

Moreover, female Generation Z grandchildren are gradually incorporated into the intergenerational economic sharing system, forming a collaborative solidarity operation pattern where adult offspring take principal financial accountability and grandchildren offer supplementary support. This empirical conclusion delivers pivotal theoretical and practical foundations for product marketing of smart health and elderly care rehabilitation assistive devices and differentiated distribution of government subsidy resources. Precisely positioning marketing and subsidy policies toward the core paying group of adult daughters constitutes a core strategy to lift the overall market penetration of intelligent aging robots.

3. Factors influencing the consumption intention of elderly care robots

After confirming that adult offspring, especially adult daughters and female Generation Z grandchildren, act as the core contributors to intergenerational economic sharing, the subsequent

research question emerges: what core variables shape their purchase intention, and through which approaches can such latent consumption willingness be stimulated and elevated?

3.1 Innovation Diffusion Modeling Based on Cognitive Mechanisms: the ASPID Model

In recent years, researchers have begun integrating insights from cognitive science into innovation diffusion research, aiming to shed light on the "black box" of individual adoption decision-making. In this direction, the ASPID model (Agent-based Stochastic Model of Intentional Bounded Rationality) proposed by Saenz-Royo et al. provides an integrated analytical framework.

The core of the ASPID model lies in formalizing the Intentional Bounded Rationality (IBR) theory to characterize the decision-making mechanism of consumers when confronted with innovative products. Unlike the classical diffusion model, which treats adoption as a unidirectional accumulation process, the ASPID model distinguishes between two distinct processes: stimulation and decision. Consumers only re-evaluate their current choice when they perceive external (e.g., advertising) or internal (e.g., social contact) stimuli; whereas the final adoption decision depends on the interaction of multiple factors.

In its mathematical formulation, the ASPID model expresses the probability of consumer i adopting an innovation as:

$$p_i = \frac{1}{1 + \frac{n_s(1 - p_i^0)}{n_c p_i^0} e^{-\beta_i \frac{V_c - V_s}{V_c + V_s}}}$$

Among:

V_c and V_s respectively represent the objective utility values of innovation (e.g., elderly care robots) and the current state (e.g., traditional elderly care methods) for specific consumers. This framework allows different consumers—based on variations in their home environments and health conditions—to perceive distinct real-valued outcomes when encountering the same technology.

β_i represents the consumer's information-processing capacity, which is influenced by their level of product knowledge. The higher this capacity is, the more accurately consumers can assess the true difference between innovation and the current state—namely, the difference. When βi=0, consumers cannot distinguish between Vc and Vs, and their decision is independent of this distinction.

p_i^0 represents the consumers' a priori beliefs—namely, their innate tendency toward innovation before encountering specific information. $p_i^0 \in [0,1]$

n_s and n_c represent the number of individuals in the consumer's social environment who are currently using a particular tool or service, as well as the number of individuals who are innovating with it; their ratio reflects the direction and intensity of social influence. This ratio can be further refined using network structure parameters to characterize the influence weights exerted by different individuals.

The key mechanism of the ASPID model lies in the multiplicative relationship between β_i and $\frac{V_c - V_s}{V_c + V_s}$.When innovation objectively outperforms the status quo($V_c > V_s$), this ratio is positive, and an increase in$\beta_i$amplifies this advantage signal, thereby increasing the adoption probability; conversely, when innovation performs worse than the status quo, an increase in$\beta_i$amplifies the disadvantage signal, thereby reducing the adoption probability. Furthermore, this effect is moderated by the social environment and prior beliefs—even when the innovation advantage is pronounced, if surrounding individuals are generally opposed and consumers exhibit innate resistance, the final adoption probability may remain very low.

This study will utilize the ASPID framework to examine the differences in consumers' adoption

mechanisms for elderly care robots across various configurations, with a particular focus on how "level of understanding" influences purchase intention through the $\beta_i$parameter, and explaining why this influence exhibits heterogeneity across different robot configurations.

3.2 Analysis of Intelligent Health and Elderly Care Attributes within the Perceived Value Theory Framework

Gu Linjia et al. (2026) adopted the analytical framework of Perceived Value Theory and applied structural equation modeling to explore intergenerational family decision-makers' purchase intention for companion-type smart health and elderly care robots. Their empirical analysis verifies an explicit value transmission chain of "functional value → emotional value → social value". Among the three dimensions, functional value occupies the dominant driving position, which demonstrates that the practical nursing utility of intelligent equipment acts as the core determinant of consumption decisions, whereas emotional value and social value function as auxiliary motivating factors. Meanwhile, the restraining effect of perceived cost remains relatively weak, revealing that pricing level does not rank as the top consideration for family purchasers in their decision-making procedures. This empirical result delivers vital policy and marketing inspirations to tackle payment obstacles: merely cutting product prices cannot fundamentally resolve consumption dilemmas, while elevating multi-layered perceived value can generate equivalent incentive effects. Detailed enlightenment is presented as follows:

(1) Prioritizing the improvement of functional perceived value requires manufacturers to concentrate on developing practical modules covering vital sign tracking and age-friendly simplified operation logic;

(2) The significant positive correlation between social value and perceived cost illustrates that consumers pursuing normative intergenerational recognition are capable of bearing higher product premiums;

(3) There exists a prominent negative correlation between emotional value and perceived value, which means sufficient affective satisfaction can lower families' price sensitivity and leave sufficient operational space for affective narrative marketing and emotional content operation.

3.3 The interactive mechanism between digital literacy and intergenerational solidarity

Hu Yangming, Luo Jun et al. (2023) further unpack the internal transmission mechanism of purchase intention. A positive progressive correlation can be observed: individuals with superior socioeconomic status generally possess higher digital literacy, and elevated digital literacy will in turn strengthen their willingness to consume smart health and elderly care services [9]. This logical chain indicates that lifting seniors' digital competence can not only directly stimulate their purchase intention, but also indirectly magnify the positive predictive effect brought by household socioeconomic standing. In addition, the affective and functional dimensions of intergenerational solidarity exert a significant negative moderating effect on the correlation between socioeconomic status and purchase intention. Concretely, the more comprehensive daily companionship and in-person care adult offspring deliver to elderly parents, the weaker the elderly's motivation to procure professional intelligent aging services will be. This empirical outcome identifies a substitution relationship between conventional home-based eldercare and technology-enabled aging solutions. Popularizing smart aging equipment essentially serves as a technical remedy to fill care gaps caused by insufficient intergenerational on-site support. If adult offspring can supply full-range daily care, the market demand for smart health and elderly care rehabilitation assistive devices will be inherently restrained .

4. Diverse Cost-Sharing Pathways for Purchasers of Elderly Care Robots

After sorting out the core subjects of payment responsibility and the driving mechanisms behind their purchase intention, the central research focus transfers to the multi-subject economic sharing of costs, and prior academic literature has put forward four mutually complementary realization pathways.

4.1 Classification System and Cost-Sharing Rules for Elderly Care Robots

To resolve such consumption deadlock, joint collaborative measures need to be advanced from two core dimensions: industrial standardized system construction and market information transparency governance. First, a nationwide unified graded classification standard framework ought to be formulated. The international normative criteria for smart health and elderly care robots issued in 2025, together with the domestic group standard General Technical Specifications for Health and Care Robots, have laid solid normative groundwork for the establishment of such hierarchical classification systems. On this basis, differentiated product grading sequences can be further categorized from three evaluation layers: functional positioning (including basic monitoring terminals, composite service equipment and full-scenario companion devices), age-adaptive compatibility, as well as operational safety and stability indicators. Such classification rules help shape a standardized product matrix covering Standard Version, Advanced Version and Flagship Version, allowing intergenerational family decision-makers to distinctly distinguish the matching functional scope and performance thresholds corresponding to various price tiers, so as to cut down information acquisition expenditures and eliminate ambiguity in consumption judgment. Meanwhile, a long-term mechanism to elevate market information openness should be set up. Government authorities may regularly sort out and issue an official qualified catalog of smart health and elderly care rehabilitation assistive devices, and entrust third-party professional testing bodies to carry out cross-model horizontal performance contrast and full functional validation on mainstream market equipment. All inspection data shall be disclosed to the public via visualized presentation carriers such as functional comparison radar graphs and comprehensive scoring matrices, which jointly build a sound price regulation mechanism and standardized benchmark system for market reference.

4.2 Intergenerational economic support and digital reverse support

Wei Yan and Zeng Zhuoyu (2026) verify that intergenerational technical support and prior product trial experience constitute pivotal driving variables that convert purchase intention into tangible consumption acts[10]. Adult offspring are far more than mere financial suppliers; they also function as technical navigators to promote intelligent equipment adoption. Through the delivery of digital reverse mentoring to lower seniors' operational entry barriers, smart health and elderly care equipment can achieve stable daily application, which forms a virtuous closed loop: intergenerational procurement → regular daily operation → household satisfaction → repeat consumption and word-of-mouth recommendation.

Hu Yangming and Yuan Yujia (2024) put forward targeted policy suggestions: local authorities ought to build community-integrated smart aging experience hubs and distribute hardware consumption subsidies as well as cash coupons, so as to incentivize adult offspring to procure intelligent care devices and services for their elderly parents and partially mitigate the intergenerational care burden borne by households[10].

Based on Intergenerational Solidarity Theory, Yu and Tian (2026) point out that prior academic literature overly relies on the dual government-market analytical paradigm and overlooks the decisive weight of household intergenerational bonds in consumption judgment. As digital natives born

alongside the internet, Generation Z are capable of tackling the triple constraints of smart health and elderly care robots throughout seniors' full life cycle ranging from active aging to full-disability nursing. Specifically, they break down obstacles on three layers: cognitive barriers stemming from seniors' unfamiliarity with intelligent devices, usage difficulties caused by complicated operation logic, and payment obstacles arising from unaffordable one-time procurement costs for ordinary families. This research expands the connotation of intergenerational solidarity beyond conventional financial support and extends it to two additional dimensions: digital reverse technical tutoring and targeted cognitive popularization.

4.3 Institutional alignment between subsidies and long-term care insurance

Huang Xiaochun (2024) carried out empirical research covering 355 rural household respondents in Zhongshan, Guangdong Province. The regression results manifest that government policy intervention exerts a prominent positive impact on purchase intention. By contrast, respondents' inherent preference for conventional in-home eldercare and reliance on public institutional aging services impose restraining effects on their willingness to consume intelligent aging equipment[11]. Such empirical evidence verifies that seniors' institutional trust in public governance constitutes a fundamental prerequisite for them to embrace socialized aging service systems.

Within the macro institutional framework of "One Body, Two Wings, and Three Synergies", An Jin et al. (2026) put forward a clear policy proposition: the national long-term care insurance mechanism shall expand its reimbursement scope to cover standardized smart health and elderly care services and rehabilitation assistive devices, and validated intelligent aging technologies with proven nursing efficacy ought to be included within insurance compensation catalogs[12]. This institutional docking scheme forms a stable capital supply channel linking long-term care insurance funds with smart aging service consumption, which boasts robust operability in national policy implementation. Hu Yangming and Yuan Yujia (2024) further supplemented differentiated subsidy design proposals: competent authorities ought to build a unified disability grading evaluation system and deliver tiered fiscal allowances to families with partially or fully incapacitated seniors, so as to mitigate intergenerational economic pressure arising from eldercare responsibilities. It is worth highlighting that upon the full launch of the national long-term care insurance digital information platform, massive structured data resources will be available for quantitative analysis. Whether smart health and elderly care rehabilitation devices can be incorporated into reimbursement lists will no longer rely on ambiguous directional policy statements, but hinge on objective empirical evidence proving such intelligent equipment can cut down total claim disbursements of long-term care insurance funds.

4.4 Emerging "rent-first, buy-later" digital consumption model

Apart from one-off full procurement, the subscription-oriented "lease first, purchase later" mechanism stands out as a promising emerging consumption mode. Under this operational framework, intergenerational family decision-makers are entitled to rent intelligent aging devices for trial experience with affordable monthly subscription fees, which substantially eases upfront capital pressure on households. The Shanghai Municipal Catalog of Community-based Rental Services for Rehabilitation Assistive Devices (2025 Edition) officially took effect in December 2025; this document incorporates companion-type smart health and elderly care robots into the municipal subsidy coverage for the first time, with the monthly self-payment cost of lightweight companion robots set at merely 80 RMB. Meanwhile, Beijing Xicheng District released the trial regulatory document Implementation Rules for Rental Services for Elderly Rehabilitation Assistive Devices, constructing a three-level rental service system covering district, sub-district and community tiers. Full rental subsidies up to 100% are granted to seniors from extreme poverty households, recipients

of subsistence allowances and low-income family groups. Moreover, Sichuan Province rolled out community rehabilitation assistive device leasing pilots in eight prefecture-level cities, delivering rental subsidies ranging from 80% to 100% for seniors aged 70 and above and extremely disadvantaged elderly groups.

In essence, the flexible “lease first, purchase later” subscription mode converts the one-time large-sum expenditure on smart health and elderly care rehabilitation assistive devices into steady, affordable recurring service charges. By cutting down the experiential entry threshold, the leasing mechanism effectively resolves the market popularization bottleneck of high-end intelligent nursing equipment brought by prohibitive upfront investment costs. It motivates household groups to embrace innovative intelligent aging technologies and accelerates technology manufacturers’ market layout within the silver economy track. Accordingly, subsequent academic research ought to further unpack the formation logic of purchase intention under leasing subscription mechanisms, and investigate how community leasing service networks can be utilized to boost the large-scale market penetration of smart health and elderly care robots.

5. Conclusions and Implications

This paper systematically sorts out the ways smart health and elderly care rehabilitation assistive devices resolve payment obstacles amid deepening demographic aging. Centered around three core research dimensions: the main subjects accountable for economic sharing of costs, internal driving forces behind their purchase intention, and diversified cost-bearing pathways, this research verifies an obvious intergenerational transfer of payment accountability, which shifts from senior end users to their adult offspring and further extends to Generation Z grandchildren. Based on Intergenerational Solidarity Theory and complemented by Perceived Value Theory, this study dissects the dual functions of digital reverse mentoring and digital-native Generation Z in breaking down adoption barriers and mitigating payment dilemmas of intelligent aging equipment. The payment dilemmas plaguing smart aging services are far more than simple household financial constraints; they represent comprehensive social propositions covering intergenerational harmony, social equity, and the ethical implementation of intelligent technologies. Accordingly, a complete collaborative governance framework must be constructed, which takes household aging demands as the fundamental orientation, regards multi-dimensional intergenerational solidarity as the core support, relies on digital technological empowerment as the implementation carrier, and takes multi-party institutional coordination as the guarantee mechanism.

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