

面向老龄化社会的城市应对

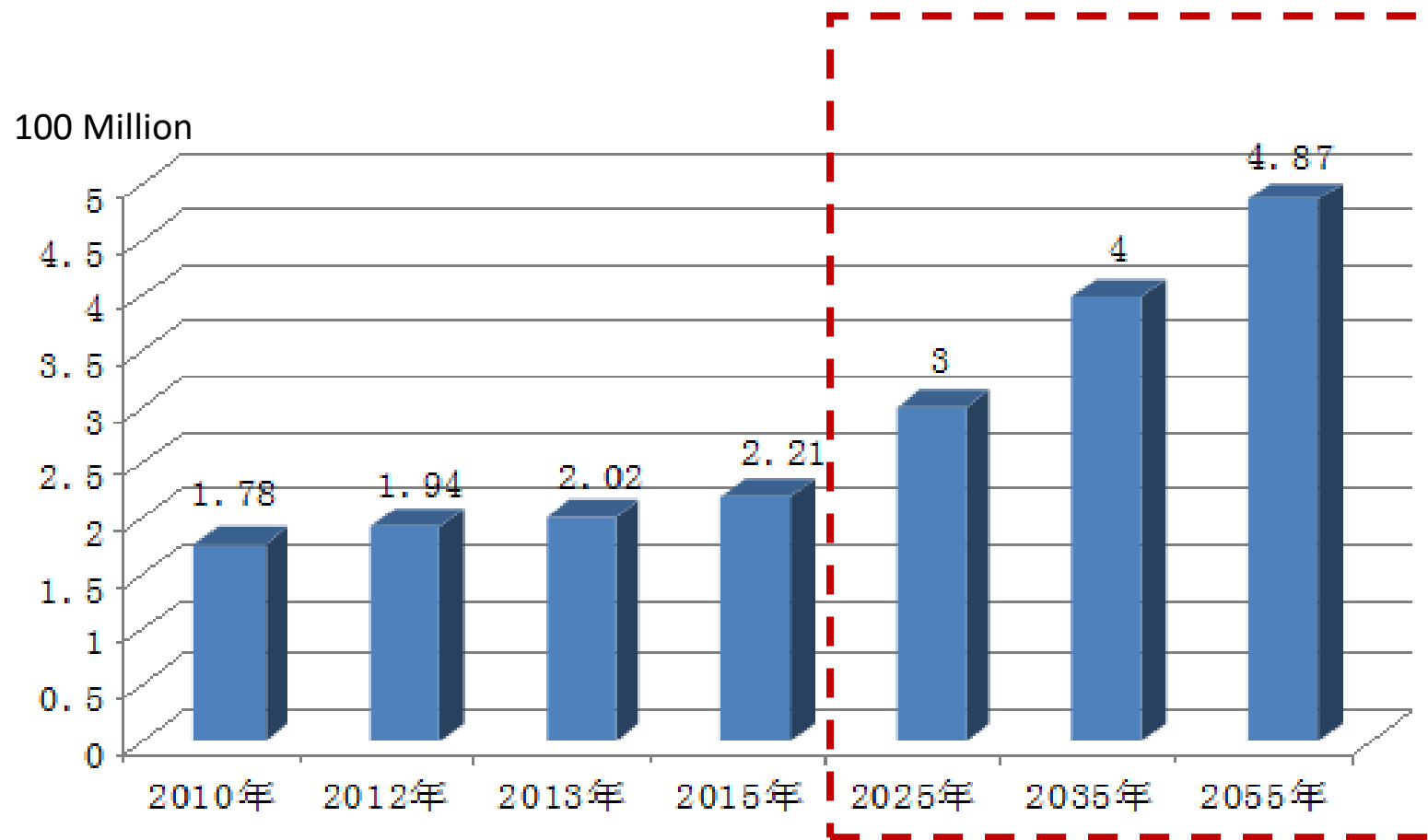
Urban Countermeasures for an Aging Society

于一凡 | YU Yifan

同济大学 | Tongji University

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中国人口老龄化 Aging Population in China



Ageing in China is of great complexity, which is caused by the regional differences, urban and rural differences, migration, social security system reform, and family-related challenges.

城市居住环境适老化水平 Living environment



Most of the older residents are found in the old neighborhoods, the demographic ageing occurring with the built environment aging, which makes the weak environment foundation seem even more stretched.

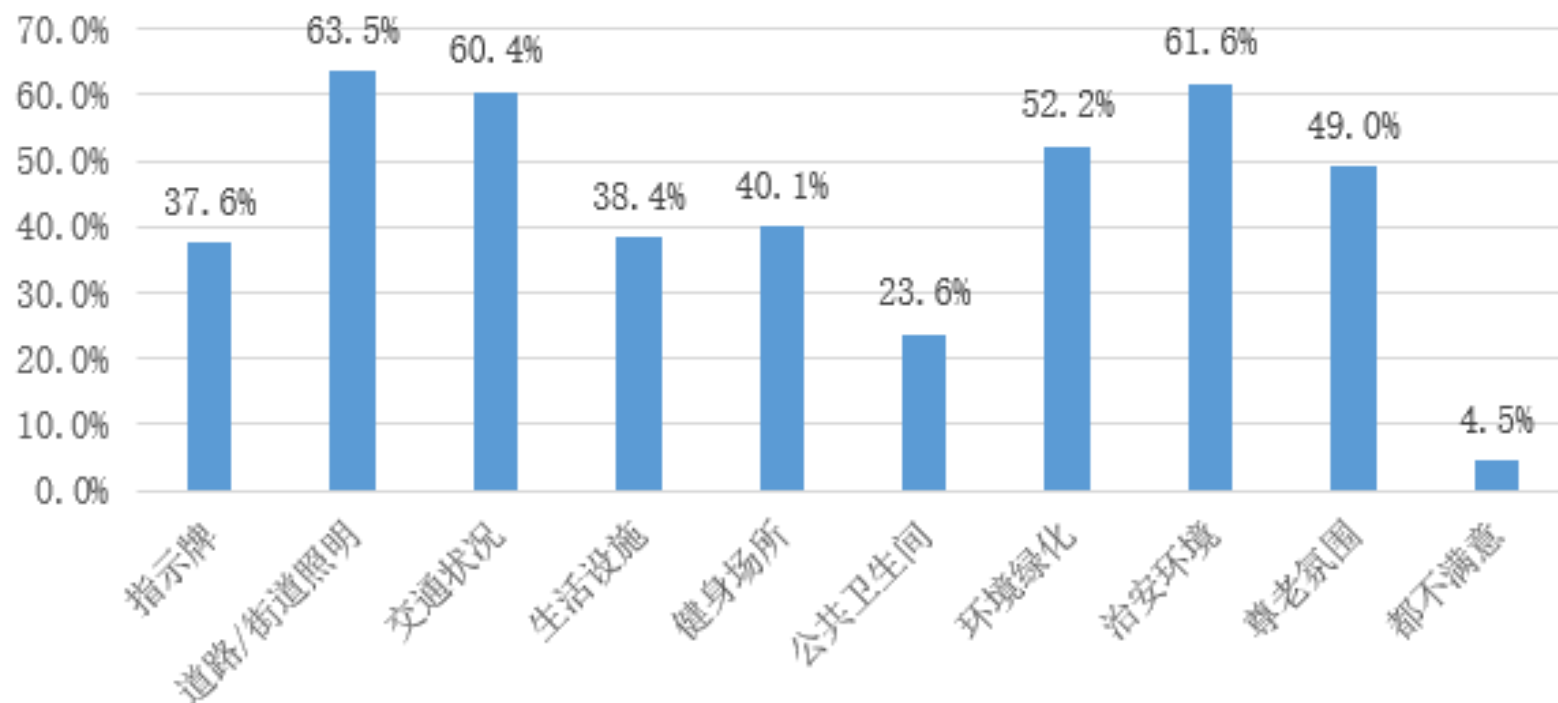
几点观察 Some observations

- 养老观念和居住模式选择的代际差异
Generation difference
- 社会化养老资源供给不足制约多样化需求满足
Limited resources Vs. diversified needs
- 建成环境的健康影响和健康效益日益受到关注
Healthy aging demands
- 公共服务资源配置总量短缺与结构性不足并存
Total shortage and structural shortage coexist

规划设计应关注的挑战 Challenges in Urban Planning

- 人口结构-建成环境 “双老化” 挑战
People-built environment double aging
- 高密度环境条件下的资源配置思路
Resource allocation in the context of high-density environment
- 推进居家养老战略的住房政策创新
Housing innovation
- 推进适老化改造的制度和机制探索
Age-adaptive renovation

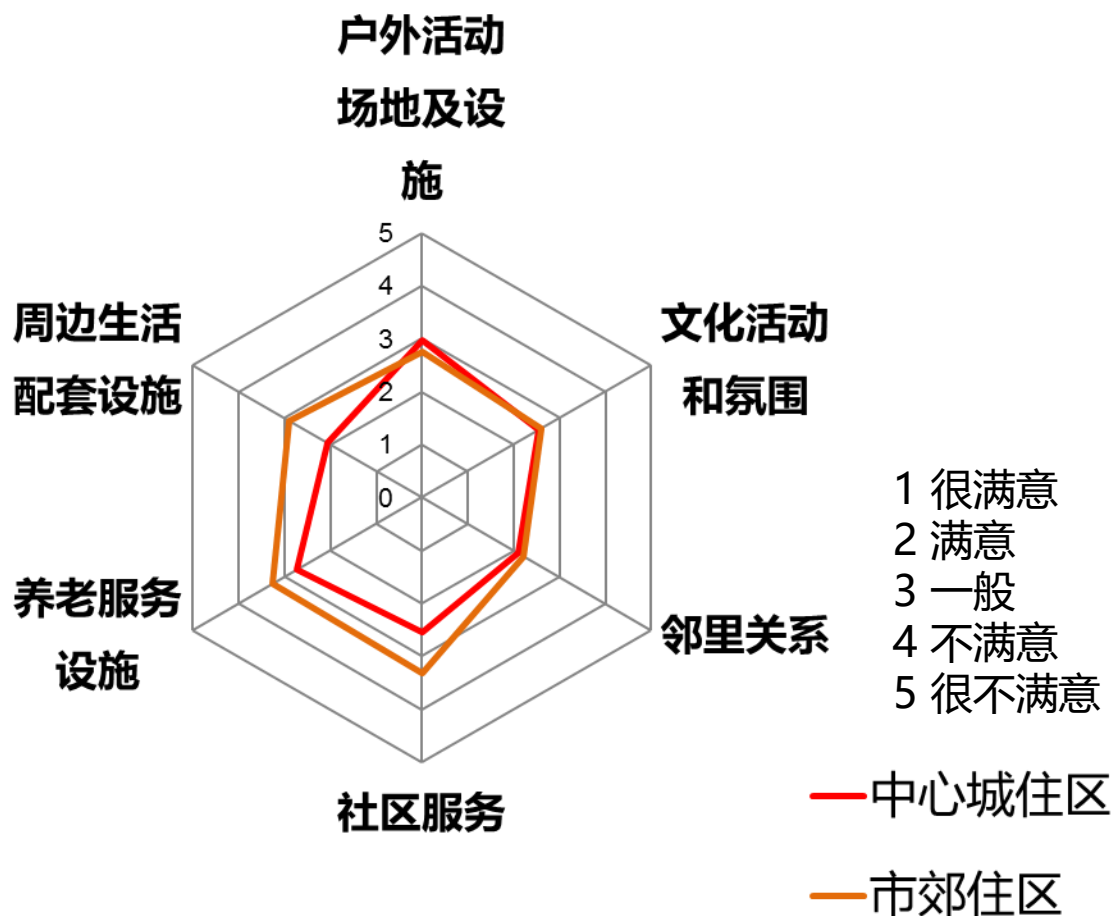
1. 老年宜居环境 Age-friendly environment



The 4th National Statistical Survey of the old population's situation (2015) results show a low satisfaction to the living environment among senior citizen.

来源：中国老龄科学研究中心，2016

上海调查 Shanghai survey (2010-2020)



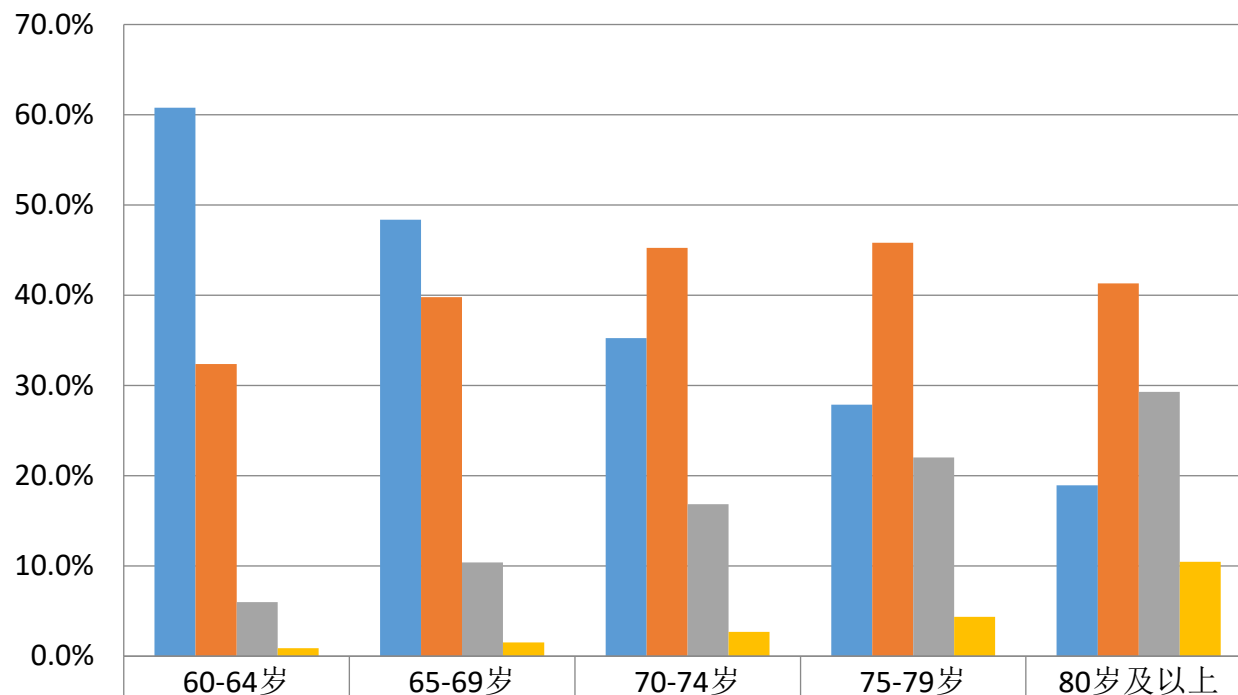
To be affected by the built environment (shops/services, social services, security, topography), the extreme climate events may also expose older people to health risks (heat, low temperatures, atmospheric pollution, natural events).

不同类型住区对适老化改造需求的变化

Changes in renovation requirements

改造意愿		里弄			公房			商品房			
		2012	2019	变化	2012	2019	变化	2012	2019	变化	
居住内环境	卫生间	地面防滑	23%	45%	23%	28%	62%	35%	18%	42%	24%
		增加紧急呼救设施	15%	36%	21%	22%	34%	12%	14%	34%	20%
		改善淋浴和盥洗室	30%	31%	0%	16%	33%	17%	7%	15%	9%
		增加助力扶手	14%	38%	24%	19%	43%	24%	9%	32%	22%
		安装坐便器	21%	20%	-2%	4%	26%	22%	1%	9%	8%
	楼梯间	楼道照明	15%	41%	26%	9%	30%	21%	5%	8%	3%
		增设电梯	5%	25%	20%	46%	59%	13%	15%	35%	20%
入口增设轮椅坡道		18%	31%	13%	14%	21%	7%	4%	18%	14%	
防滑设施		13%	21%	8%	14%	21%	7%	10%	15%	5%	
	增加墙面扶手	20%	19%	-2%	14%	16%	2%	8%	15%	7%	
居住外环境	最常去的户外活动场所	楼前	38%	41%	3%	12%	24%	12%	5%	12%	7%
		小区活动广场	8%	15%	6%	27%	28%	1%	28%	37%	9%
		小区绿地	6%	6%	0%	9%	19%	10%	10%	31%	21%
		社区活动中心	9%	10%	1%	30%	18%	-12%	28%	14%	-14%
	户外场所需要改善的问题	活动场地少	42%	22%	-21%	21%	18%	-4%	38%	12%	-26%
		离家太远	10%	6%	-5%	3%	3%	0%	1%	4%	2%
		缺少遮蔽	10%	16%	5%	16%	16%	0%	4%	5%	2%
		缺少座椅	14%	9%	-5%	18%	12%	-6%	10%	18%	8%
		台阶多	1%	8%	7%	2%	10%	8%	0%	6%	6%
		缺少公共厕所	9%	6%	-3%	21%	9%	-12%	13%	16%	2%
		照明不好	2%	6%	4%	7%	6%	-1%	4%	10%	5%
	活动范围	5分钟以内	7%	36%	29%	4%	42%	38%	1%	48%	47%
		5-10分钟	41%	24%	-18%	49%	33%	-16%	41%	34%	-7%
10-15分钟		20%	21%	0%	24%	20%	-4%	18%	12%	-6%	
15分钟以上		34%	21%	-14%	25%	6%	-19%	41%	7%	-34%	
养老设施	设施需求	医疗保健	27%	55%	29%	27%	42%	15%	17%	40%	22%
		餐饮设施	14%	31%	17%	32%	48%	16%	19%	35%	15%
		文娱活动	48%	41%	-8%	48%	54%	6%	29%	49%	21%
		体育锻炼	17%	38%	21%	9%	38%	28%	9%	36%	27%
		读书学习	17%	13%	-4%	20%	26%	6%	17%	23%	6%

2. 促进健康老龄化 Promoting healthy aging



Different from the care systems developed to treat infectious and acute care diseases in institutional settings, age-ready health care systems need to pay more attention to treat chronic diseases resulting from physical weakness, lifestyle and mental health issues of aging population in community settings.

来源：根据中华人民共和国国家统计局第六次全国人口普查长表数据资料整理绘制

社区建成环境要素体系

健康结果变量选取

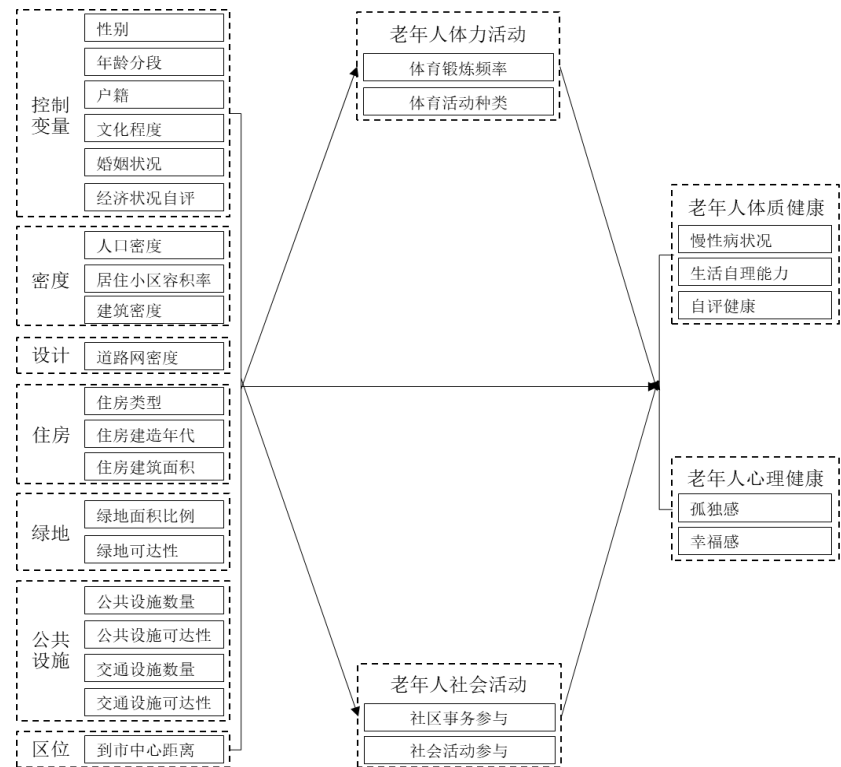
概念模型

项目	本研究采用的指标	
密度	1	人口密度
	2	容积率
	3	建筑密度
设计	4	道路网密度
住房	5	住房类型
	6	住房建造年代
	7	住房建筑面积
绿地	8	绿地面积比例
	9	绿地可达性
公共设施	10	公共服务设施数量
	11	公共服务设施可达性
	12	交通设施数量
区位	13	交通设施可达性
	14	到市中心距离

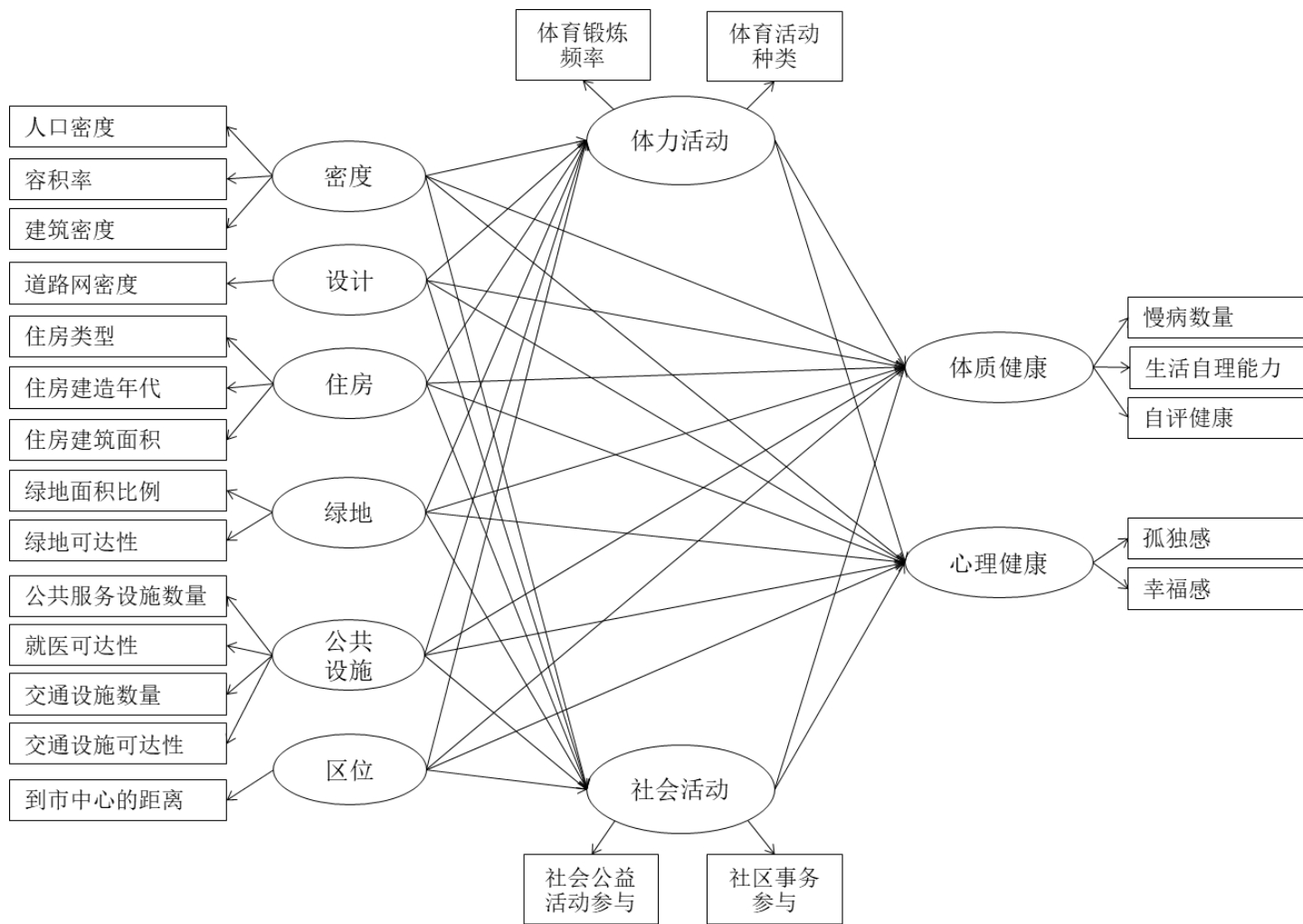
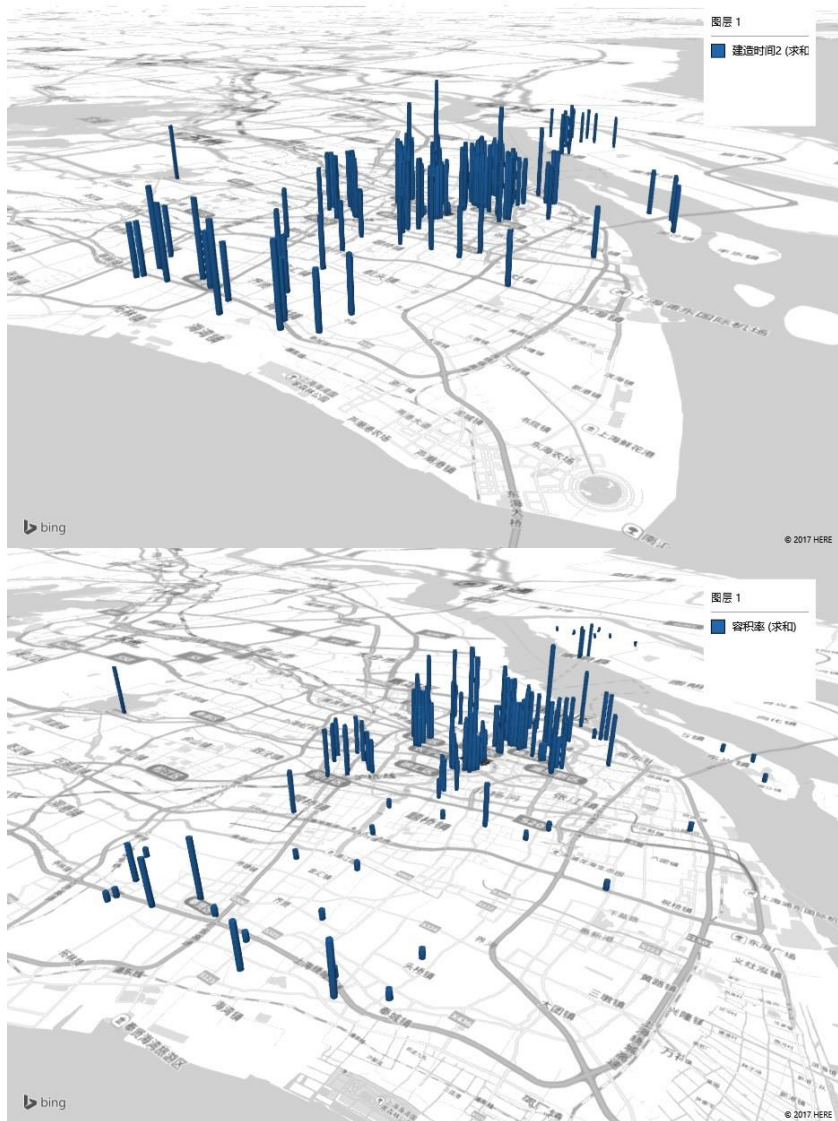
项目	本研究采用的指标	
体质健康	1	慢性病状况
	2	生活自理能力
	3	自评健康
心理健康	4	孤独感
	5	幸福感

体力活动	1	体育锻炼频率
	2	体育活动种类

社会活动	1	社会公益活动参与
	2	社区事务参与



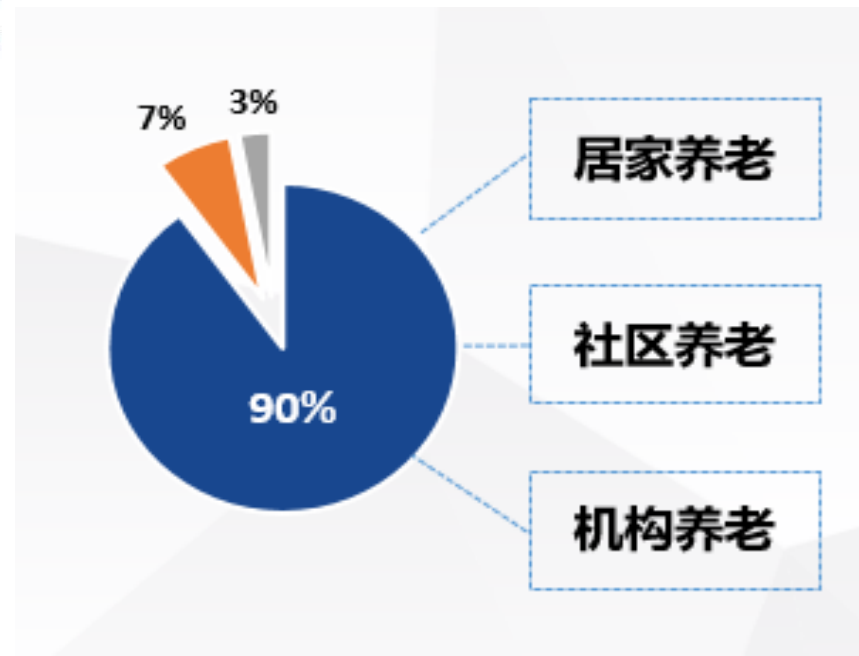
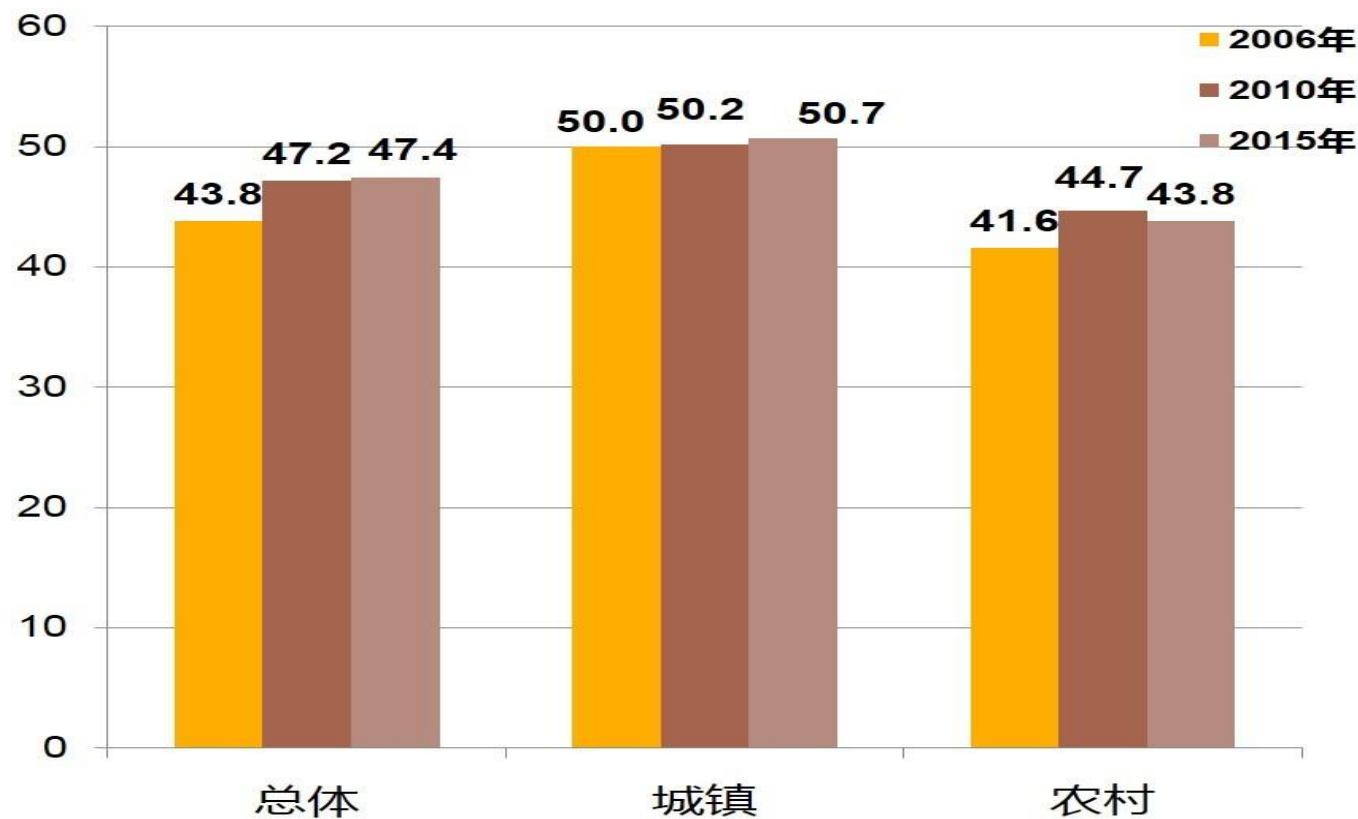
于一凡. 建成环境对老年人健康的影响: 认识基础与方法探讨[J], 国际城市规划, 2020 (35) 1: 1-7



3. 住房政策 Housing policy

我国老年人住房满意度的变化

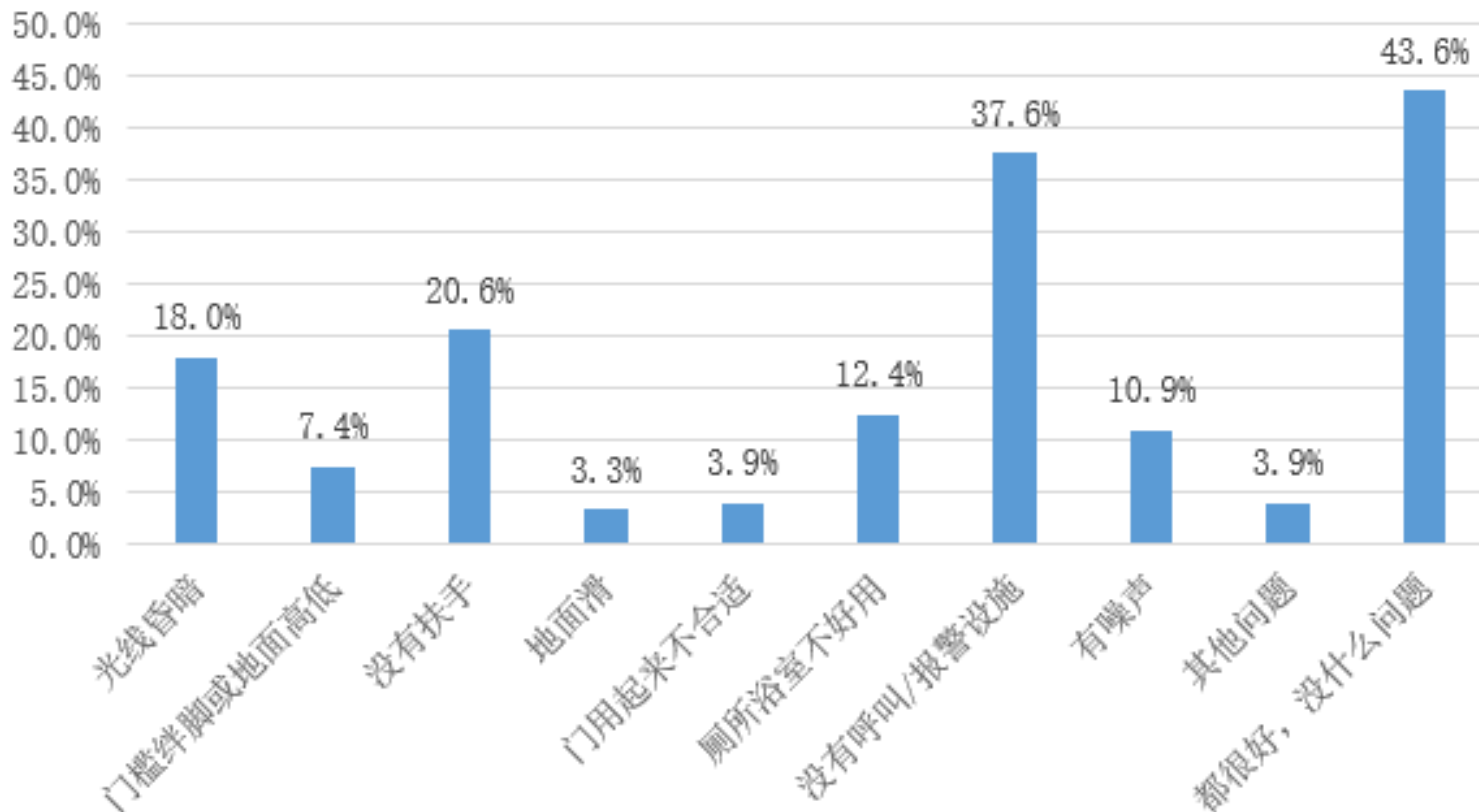
Changes in Housing Satisfaction of the Elderly in China



来源：中国老龄科学研究中心，2006/2010/2015

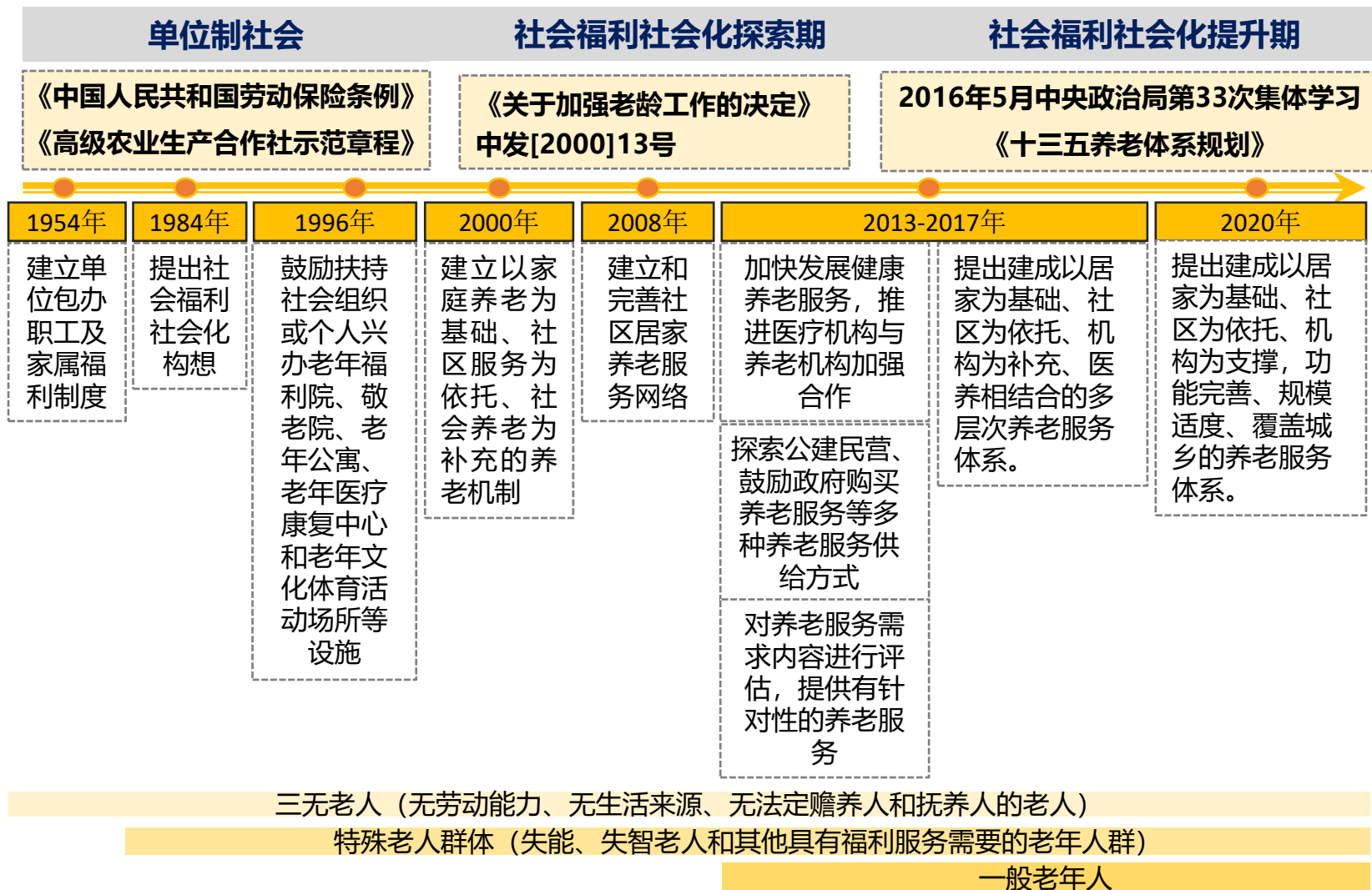
我国老年人报告住房存在的问题

Dissatisfaction in Housing Reported by Elderly People



来源：中国老龄科学研究中心，2016

4. 养老服务设施 Care & service facilities



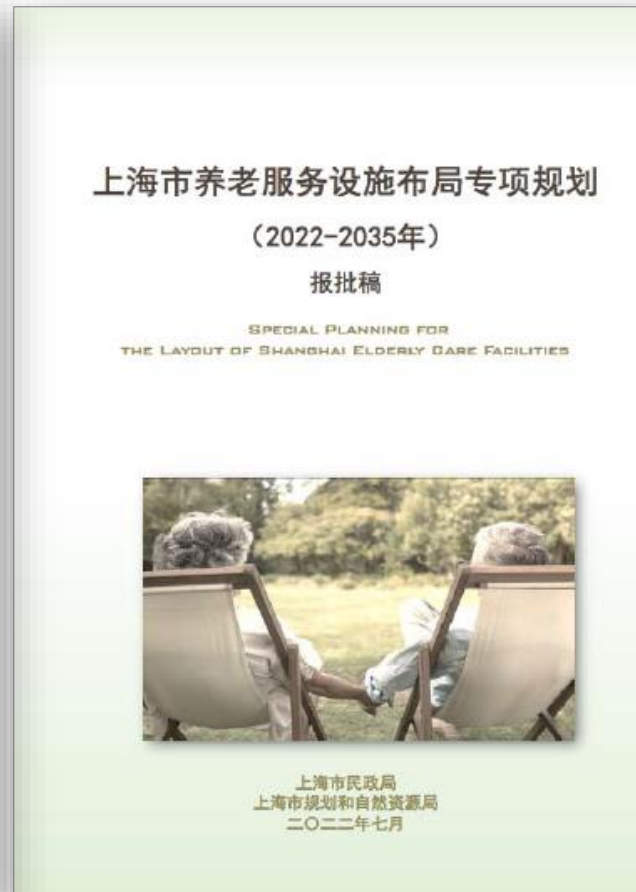
发展阶段

主要措施

服务对象

养老服务设施专项规划

Plan for Elderly Care Facilities

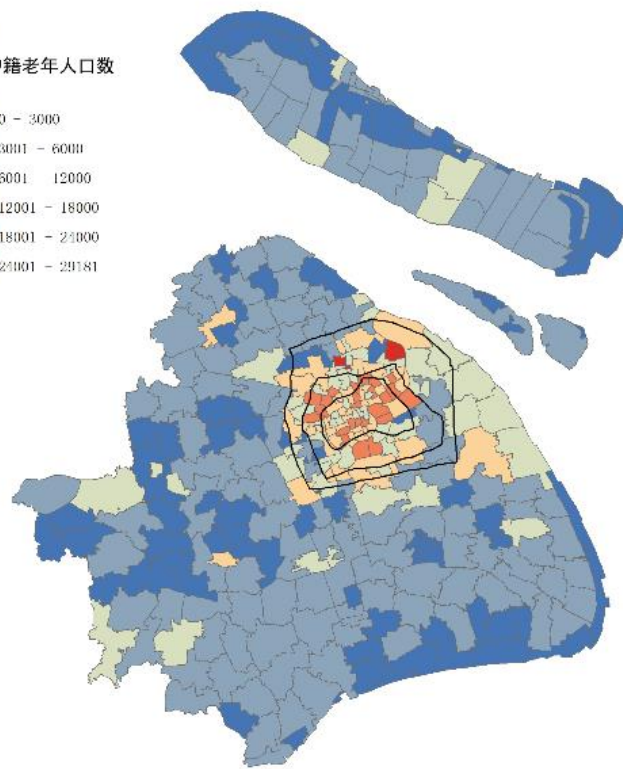


To facilitate the strategy of Aging-in-place, family care-giving increasingly requires supplementation by community and home-based care, plus appropriate institutional care.

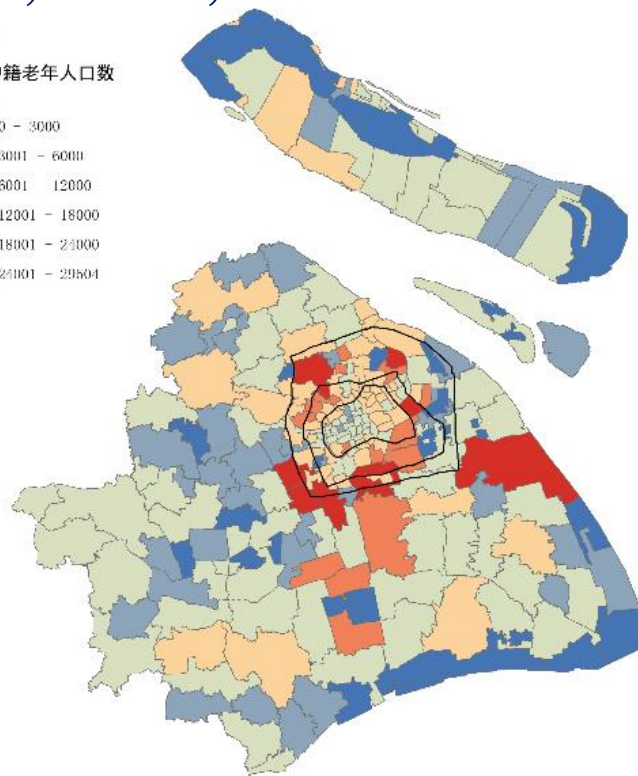
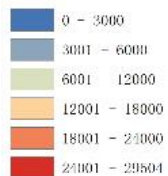
五普、六普、七普上海市户籍60岁以上老年人口分布情况

Distribution of the elderly population in Shanghai in the fifth, sixth, and seventh censuses

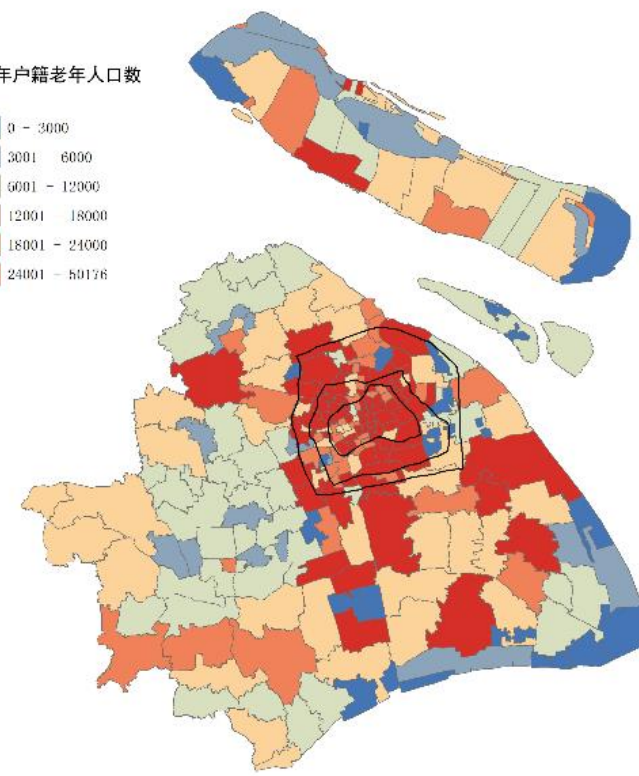
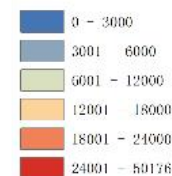
图例
五普户籍老年人口数



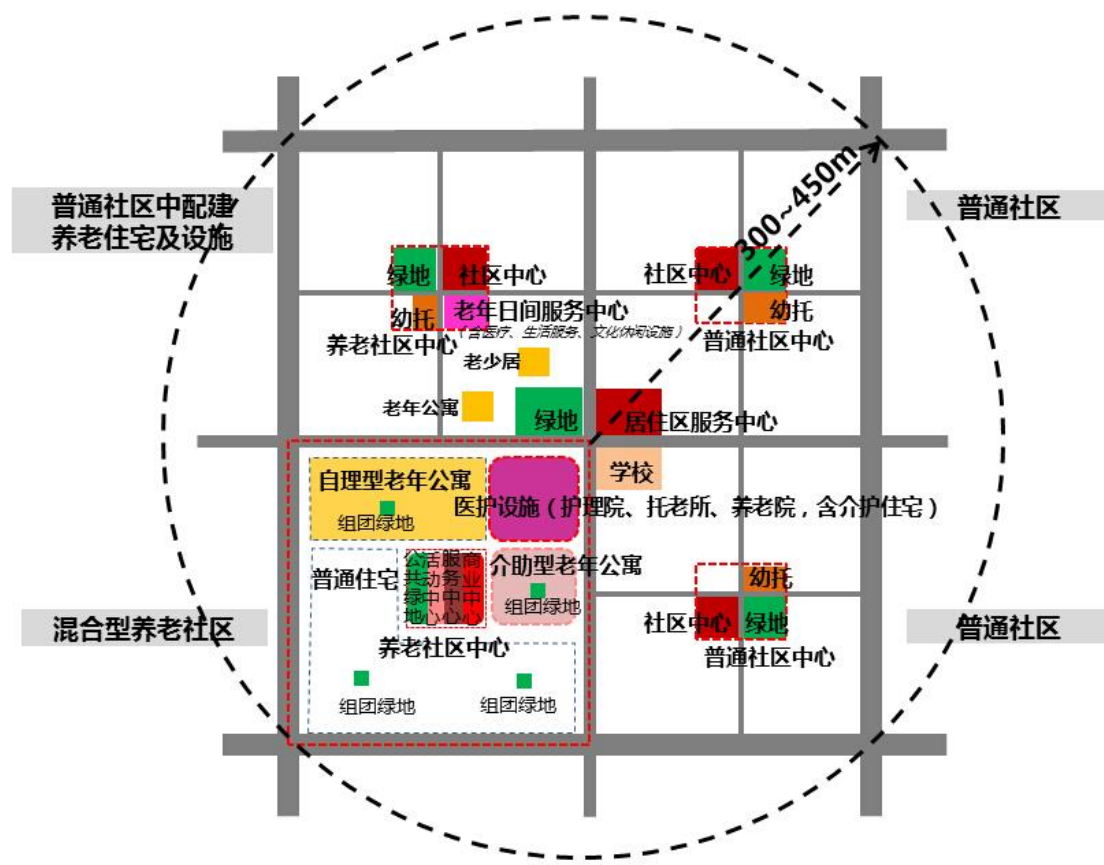
图例
六普户籍老年人口数



图例
2014年户籍老年人口数



社区居家养老服务设施 Amenities at Neighborhood Level



1. Public services/management at the community level need to be coordinated.
2. Technical guidance and renovation permits are in urgent need of improvement.
3. Social organizations and private sectors need the legitimate channels to provide care/services under supervision.

5. 适老化更新改造 Age-adaptive renovation



Many Chinese cities have started the adaptive renovation in the neighborhoods where older people are concentrated. The main measures taken at this stage include barrier-free environment, green/open space. However, these actions have more or less meet troubles of lacking funds, community resistance, and low satisfaction. The key aspect may be an action plan based on the consensus among stakeholders, and appropriate technical guidance.

上海市适老化改造服务平台

Renovation menu offered on Shanghai Service Platform

安装抓杆 + 燃气、火警报警装置 + 地面防滑处理

A类产品

(可从以下产品中任选 2 种)

- 1 固定可折叠淋浴凳**

功能: 可坐姿洗浴, 更省力, 也方便照顾人员助浴; 可折叠, 部分款型带支撑架。


- 2 移动可折叠淋浴凳**

功能: 可坐姿洗浴, 更省力, 也方便照顾人员助浴; 无需固定, 可折叠。


- 3 单边 U 形上翻扶手**

功能: 安装马桶旁, 助力支撑, 不用时可上翻, 节省空间。


- 4 一字形扶手**

功能: 安装于换鞋凳或马桶旁, 起身时支撑辅助。


- 5 L 形多功能扶手**

功能: 安装于马桶旁或者淋浴区, 起身时支撑辅助。



*以上为示意图, 仅供参考, 以实物为准。

B类产品

(可从以下产品中任选 1 种)

- 1 适老智能马桶盖**

功能: 按摩清洗, 缓解便秘, 如厕方便; 坐圈加热, 提升冬天如厕的安全性及舒适性。

材质/型号: 分体式, 储热式, 多重清洗模式。


- 2 地面防滑处理**

功能: 瓷砖地面非常湿滑, 发生摔倒的风险很大, 防滑处理在原有瓷砖表面进行防滑剂的喷涂, 有效增加瓷砖表面的摩擦系数, 方便快捷, 不影响美观。

服务说明: 釉面砖、抛光砖、玻化砖都适用, 喷涂之前需要对瓷砖表面进行深度清洁、干燥。产品仅适用于湿滑情况, 干滑情况不适用。

(产品包内施工面积不超过 10 平米, 若需增加面积费用另计)





6. 应用智能技术联接服务和需求 Use the smart technology



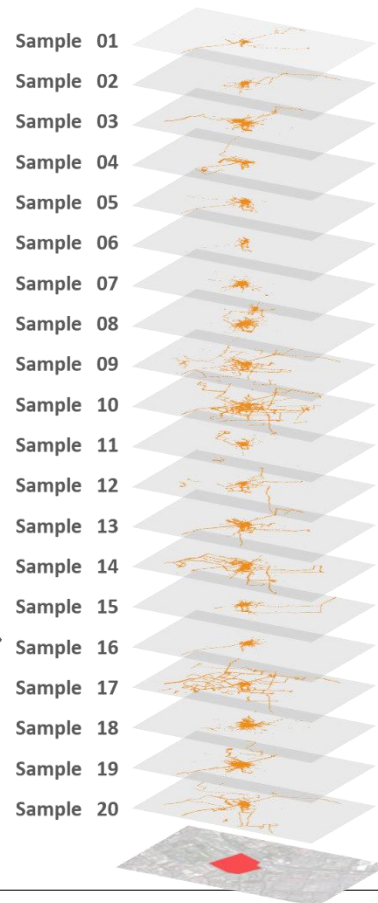
Smart technology is not only important for the efficiency and quality of institutional facilities, but also a main innovative area for community/home care. Current smart technology applications include smart homes, smart wearable devices, remote monitoring and diagnosis, biological status monitoring, risk warning, and companionship

社区老年人时空行为研究

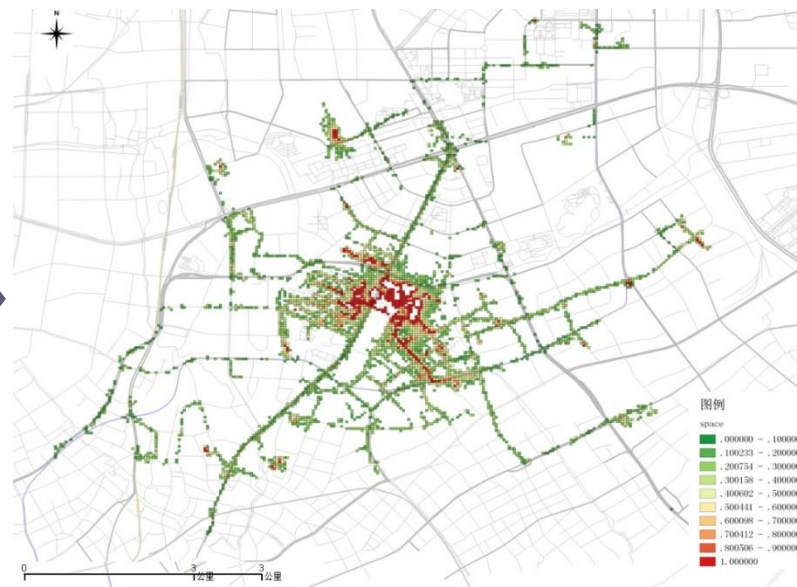
Study on older people's spatial behavior and travel preference



个体社区生活圈叠加



个体社区生活圈聚类



同济大学, 2016

启示 Implications

1. 面向老龄社会的规划干预的目的在于最大程度地为老年人提供服务和支
持，存在于城市、社区、居家环境各个层次，需要统筹部署。

A overall strategy for Urban-neighborhood-home environment intervention.

2. 规划设计的目标不仅在于弥补老年人的功能退化，也在于促使其与社会
环境的互动、获取服务、提高应对挑战的能力，应纳入城市更新的系统应
对。

Integrated action of physical / social support in urban renewal.

3. 发展就地养老战略的前提是服务和环境的支持，规划设计的关键在于提
供多样性的选择，而非采用单一标准满足复杂需求。

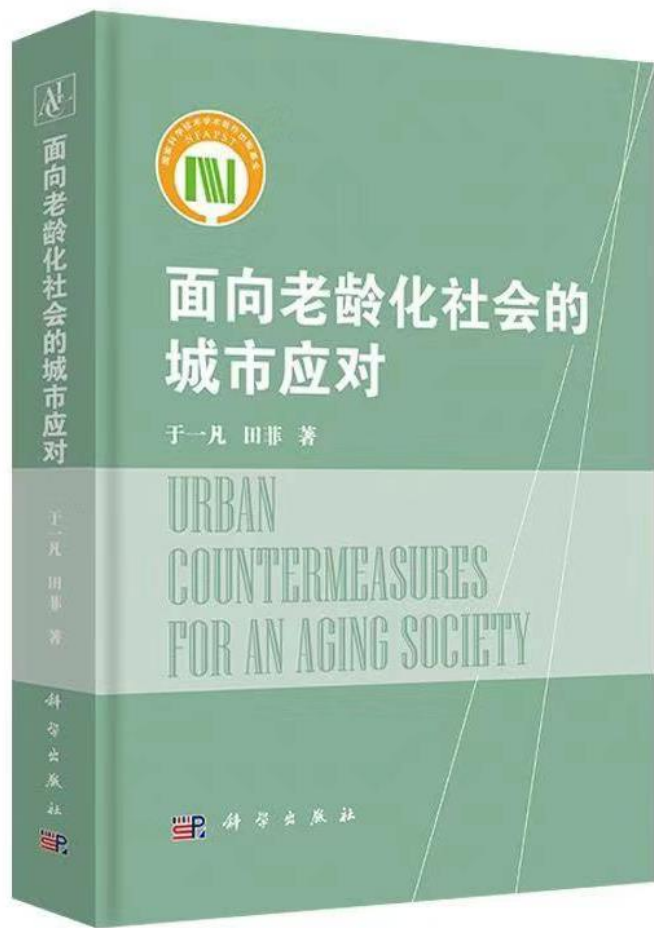
A variety of options, instead of single standard.

4. 中国城市的高密度建成环境具备服务便利、可达性高等方面的优势，更容易获得非正式服务和支持；但同时面对资源匮乏、拥挤嘈杂、自然环境缺失的挑战，对逐渐衰弱的老年人支持力度下降。创新养老模式、新技术的应用对于预防社会隔离、衔接需求和服务至关重要。这些创新往往基于与相关领域的合作。

Facing to the advantages and shortages of high density settings, innovative thinking and new technology are needed.

5. 逐步将主动健康意识纳入规划决策和行动意识。

Integrate health awareness into public decision-making and action.



于一凡 | Dr. Prof. YU Yifan

同济大学 建筑与城市规划学院 | Tongji University

老龄城市研究中心 | Aging City Lab

yuyifan@tongji.edu.cn



同濟大學
TONGJI UNIVERSITY

