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PERCEPTIONS AND USE OF OPEN SPACE IN HIGH DENSITY RESIDENTIAL DEVELOPMENTS – CASE STUDIES IN HONG KONG

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Open space is an important land use in urban design having social and environmental contributions to a city and its community. In Hong Kong's public housing estates the open spaces act as extended living spaces from the otherwise tight private living spaces and are especially popular among the elderly community. The high density settings influences the quality of open space, thus occupants overall satisfaction and use. Lack of open space provisions, crowding, lack of privacy, lack of greenery, poor environmental quality are some negative conditions seen in a high density setting. But such settings also offer some positive conditions such as reduced travel time to open space, better social contact and safety. This study identifies the significant physical and social qualities of open space influencing the satisfaction and use of open space. It further highlights qualities of open space specific to a high density environment and therefore specific to perceptions and use of open space in high density settings. Random interview survey is conducted in and around seven open spaces in three selected high density public housing estates in Hong Kong in order to collect data on respondents' perceptions and evaluations of open space. Statistical analysis is done to identify significant variations in respondents' perceptions and evaluations of open space. The significant factors influencing satisfaction and use of open space is identified. Findings formulate a series of variables that need to be considered for efficient planning of open space.

1. Background

1.1. *Defining the quality of open space and its contribution to a community.*

The characteristics that define the quality of open space can be categorized as the physical quality and social quality. The physical quality of open space can be defined as physical dimensions, micro-climate, amenities and activities according to studies done by [1]. The social quality of open space can be defined as the social interaction, therapeutic quality, privacy, crowding levels, safety. Public space plays an important role in urban planning such as increasing social interaction and building sense of community [2]. It has many contributions to a city. It is used to link neighbourhoods and buffer incompatible uses, when left natural it helps control floods, purify run off, recharge groundwater, support life and afford scenic views valued by residents, and if bound and amenitised it provides gathering places for social interaction, recreation, and civic function.

1.2. *The quality of open space in high density mixed use setting*

The high density mix use setting has both positive and negative influence on the quality of open space.

According [3] a compact city greatly favours walking with much better accessibility to facilities than a sprawling city. It is also said that urban intensification leads to safer vibrant areas and better social interaction, through more opportunity for contact in neighbourhoods; streets and public spaces and better accessibility to facilities. According to [4] Mixed used street forms promote vitality as opposed to mono zoning. A balanced mix of uses such as working, services and living activities provides lively, stimulating secure public realm and promotes the sense of community in the neighbourhoods. But it is also claimed that high density gives rise to over crowding, lack of private living space, and is an infringement to the quality of life[5]. The compact city forms suffered from perceived lack of greenery, open spaces, parks and privacy which were seen to be better in low density environment [3]. Tight living space in Hong Kong results in overuse and high demand for public open space. But due to competing demands of high population and scarcity of

land, the provision of good quality urban open space is a critical issue.

2. Factors influencing 'satisfaction' and 'use' of open space and their measures

Two types of variables are defined. The dependent variables are 'satisfaction of open space' and 'intensity of use'. The independent variables are 1. Physical quality of the open space, 2. Social quality and 4. Socio-demographic background of respondents.

[6] Measures the people engaged in different type of activity by "intensity of people" in each activity. The factors influencing the intensity of use are spatial, physical, social and economic variables. [7]in his study on perceptions and use of open space measures the use of the park as a verbal measure of frequency of visit per month on a 7 point discreet interval scale. [7] in his study has several independent variables as predictors of frequency of use namely; 1. Human factors such as income, age, gender, family size, 2. perceptions of facilities, environmental qualities of the park, 3. perceptions on adequacy or inadequacy of parks.

According to studies done by [8] on park use demographic factors, availability of leisure time, house types, purpose of park use, interaction with people, duration and frequency of visits, degree of socializing and social privacy limits were considered as key factors influencing park use.

According to study done by [1] on making successful public space, he has identified key criteria to study urban streets and spaces, and identified the physical designable criteria in four categories; 1. physical dimensions, 2. microclimate, 3. amenities, 4. activities. Such physical qualities of open space will influence the use and satisfaction of open space.

Crowding is considered a factor that influences the overall satisfaction in using a leisure space. According to [9] the number of encounters among parks and wilderness visitors is negatively, but weakly to moderately related to visitor satisfaction. In his study [10] explores the relationships between number of encounters, crowding, solitude/privacy achieved and its influence on overall experience quality. There are numerous empirical studies testing hypothesis that the use density (or encounters) is negatively correlated with experience quality according to [11] and [12]. A common hypothesis in crowding studies is that user density influence perceived crowding which, in turn, influences experience quality[10].

Accessibility of public space is be argued as being one of the most effective factors and deterrents to increased utilization of and achievement of social interaction in a public space and physical and psychological access to public spaces is a basic consideration for all open space planning [2]. According to [13] the compact city structure promotes physical accessibility, which causes reduction in travel distance to public spaces. According to [14] and [15] accessibility involves not just physical distance distances and time but social, cultural and gender based constraints[16]. In this study the accessibility is measured as travel time to open space.

According to[17] factors affecting the use of and satisfaction of the user of open space are classified as accessibility, congestion/crowding levels, comfort, variety of activity, facilities, quality, safety, attractiveness, maintenance and user characteristics.

2.1. Research hypothesis

A series of variables are hypothesized as critical for influencing the satisfaction and use of open space in Hong Kong.

Social qualities such as crowding, lack of privacy, better social interaction and social value of the open space, safety at day time and night times, influence open space satisfaction and use.

Also lack of open space provisions, facilities, reduced travel time indicating high accessibility, aesthetic quality, micro climate or environmental conditions are physical qualities of open space influencing satisfaction and use.

The socio-demographics and economic backgrounds of the respondents such as age, gender, income level, education, economic activity status, availability of time for leisure, leisure preference are also determinants of satisfaction and use of open space.

2.2. Open space use in Hong Kong

The population of Hong Kong increased dramatically after the Second World War because of the influx of immigrants from Mainland China and the increase in economic activity. A population growth rate of approximately 1 million is observed in every 10 years in the last decade and the population forecast for 2030 is 9

125

million [18]. Such increase in population and the scarcity of buildable land put immense pressure on development and housing. Such pressures impact the private living space per person, and also public open space provisions for people having adverse effects on the living standards and quality of life.

Due to constrained private living spaces people in Hong Kong spend most of their time in public living spaces which constitutes both indoor and outdoor public spaces. A Hong Kong resident's private life goes beyond his home into public gathering places like shopping malls, restaurants, karaoke bars, parks, open spaces known as borrowed spaces[19].

The Hong Kong Planning Standards and Guidelines define and categorize open space as regional, district and local or neighbourhood open space with active and passive uses. The most popular form of leisure among the Hong Kong population is passive recreation in planted areas and sitting out areas within neighbourhoods (local open spaces) and households earning less than HK$5,000/US$ 640 per month spend more than 36h/w on leisure more than any other income group [20] (the median monthly household income is HK$15,000/US$1920). Meanwhile the Hong Kong demographic statistics show a trend of increase in aging population. The total population is 6,803,100 with the median age rising from 30 in 1988 to 36 in 2003. The aged population above 65 years of age is increasing from 10.7% in 1999 to 11.9% in 2004. A common trend in Hong Kong is that the use of open spaces is mostly patronised by the aged population. The increase in aged population adds to the demand for better quality and provisions of passive open space to serve the population demands in Hong Kong.

In comparison to other cities in the world the open space provisions in Hong Kong are very low. The most deprived open space in terms of quality and quantity are in the older, more densely developed urban areas of Hong Kong and exhibits serious shortcomings in open space standards. Limitations of land for open space and high population density and increasing demand for high building density have critical implications on the quantity and quality of open space in Hong Kong.

3. Methodology

3 public housing estates namely Upper Wong Tai Sin, Lower Wong Tai Sin II and Fortune Estate are selected from Kowloon high residential zone. The cases represent a variation in high density, mix uses and physical quality of open space with easy access to Mass Transit Rail. Data collection is done via questionnaire survey to gather data on respondents' socio-demographic profiles, satisfaction and intensity of use of open space, respondents' evaluation of physical and social quality of open spaces. A total of 300 questionnaires constituted 100 from each estate, where 50 random interviews each were conducted on one working day and one weekend from 10.30 a.m. to 6.30 p.m. SPSS software is sued for descriptive, one way analysis of variance, correlation and regression analysis.

4. Analysis

Descriptive statistics is done to explore the backgrounds of respondents and their perceptions. ANOVA analysis is done to identify the significant differences in perceptions and use of open spaces across different socio-demographic and economic groups of respondents, across the three cases and the seven open spaces. Then correlation and regression analysis is done to identify the significant variables that influences respondents 'satisfaction and 'use' of open space. Findings are adopted as important factors that influence the demand and overall satisfaction of open space which is useful knowledge for efficient open space planning. .

4.1. Respondents socio-demographic backgrounds and perceptions

86% in all three cases are residents 63.3% female and 36.7% male. 44% are aged above 65 while the rest of the 56% are equally distributed across ages from 14 to 65. 78% are having a household income below 10,000HKD (1USD=7.8HKD). 93.3% are having primary to secondary education level and 6.7% have up to tertiary education. 85.7% are not economically active mostly retired, students, home makers or unemployed and 14.3% are economically active. 88% live in flat sizes less than 50 sq.m and respondents household sizes are equally distributed from 1 to 4 member households.

68.7% have time for leisure everyday and the leisure preferences of 30.3% is to use open space inside estate, 33.7% is to use open space outside estate, 20.7% prefer the mall, cinema instead as an alternative and 15.7 prefer staying at home. Only 13.3% visit open space inside the estate to meet friends and socialize

(social activity) while 30.7% only pass by (necessary activity) and 56.3% use it only when they feel like it (as an optional activity).

4.2. Social interaction with others in open space

The mean differences of social interaction levels with others in open space is highly significant at $p<0.001$ level for age groups (S=0.000), income level (S=0.000), education (S=0.000), economic activity status (S=0.000), flat size (S=0.000), household size (S=0.080). But results show no significant differences in levels of social interaction across gender (S=0.180).

Further Bivariate Correlation shows that increase in age (parsons' correlation=0.335) has significant positive correlation on social interaction. Also increase in income (parsons' correlation=-0.313), education (parsons' correlation=-0.276), flat size (parsons' correlation=-0.280), house hold size (parsons' correlation=-0.159) has significant negative correlation on social interaction with others in open space.

Further increase in social qualities of open space such as crowding levels, social value and overall satisfaction of open space has significant positive correlation on social interaction in open space. Physical qualities such as aesthetic quality, environmental or micro climate also has significant positive correlation.

4.3. Significant differences in perceptions and use of open space across the three cases

One way ANOVA results and Post Hoc Test across the cases Upper Wong Tai Sin (Case No. 1), Lower Wong Tai Sin (Case No. 2) and Fortune Estate (Case No. 3) show significant mean differences in frequency of use- no of visits per month(S=0.004), aesthetic quality (S=0.029), environmental quality(S=0.035) at p<0.05.

Also respondents' open space evaluation on Crowding (S=0.000), privacy (S=0.000), Interaction (S=0.000) and maintenance (S=0.000) show highly significant mean differences across the 3 cases at p<0.001 level. Results show that the three cases vary in above mentioned physical and social quality variables and use. But overall satisfaction levels of open space across the three cases are not significantly different.

4.4. Significant differences in perceptions and use of open space across the seven open spaces

One way ANOVA results across the 7 open spaces in Upper Wong Tai Sin(OS1, OS2 and OS3), in Lower Wong Tai Sin(OS4 and OS5) and in Fortune Estate(OS6 and OS7) show significant mean differences in overall satisfaction with open space(S=0.002), satisfaction with open space provisions(S=0.003), safety at day time(S=0.003), social value(S=0.047), and aesthetic quality (S=0.039) at p<0.05.

Respondents' frequency of use (S=0.000), duration of visit(S=0.000), crowding(S=0.000), privacy(S=0.000), interaction(S=0.000), maintenance(S=0.000) and environmental quality (S=0.000) show highly significant mean differences across the 7 open spaces at p<0.001 level. This shows that the 7 open spaces are varying in above mentioned physical and social quality variables, satisfaction and use.

4.5. Open space satisfaction across socio demographics

ANOVA results show that mean differences of open space satisfaction levels is highly significant at p<0.001 level for age groups(S=0.000) and income level (S=0.000) while education(S=0.005), economic activity status(S=0.002) and flat size(S=0.044) is significant at p<0.05 level. But results show no significant differences in levels of open space satisfaction across gender(S=0.572).

4.6. Correlations on satisfaction of open space

Further Bivariate Correlation results indicate that respondents with higher income, education levels, flat sizes, and house hold sizes have significant negative correlation to satisfaction with open space and those higher age groups has significant positive correlation on open space satisfaction at 0.01 levels (two tailed).

Also satisfaction with open space provisions, safety at day time and night time, relationship to others in open space (stranger, friend or neighbour etc), privacy, interaction with others in open space, maintenance, aesthetic quality and environmental quality of open space has significant positive correlation on overall satisfaction of open space at 0.01 levels (two tailed), see table 1.

Table 1. Correlations – satisfaction of open space

Variables	Correlations	satisfaction
Age	Pearson's correlation Sig (2 tailed) N	0.273 0.000 300
Income level	Pearson's correlation Sig (2 tailed) N	-0.217 0.000 300
Education level	Pearson's correlation Sig (2 tailed) N	-0.180 0.002 300
Flat size	Pearson's correlation Sig (2 tailed) N	-0.168 0.004 300
Household size	Pearson's correlation Sig (2 tailed) N	-0.187 0.001 300
Safety-day time	Pearson's correlation Sig (2 tailed) N	0.156 0.007 300
Safety-night time	Pearson's correlation Sig (2 tailed) N	0.117 0.043 300
Relationship with others	Pearson's correlation Sig (2 tailed) N	0.196 0.001 300
Privacy	Pearson's correlation Sig (2 tailed) N	0.149 0.010 300
Interaction with others	Pearson's correlation Sig (2 tailed) N	0.160 0.005 300
Maintenance	Pearson's correlation Sig (2 tailed) N	0.449 0.000 300
Aesthetic quality	Pearson's correlation Sig (2 tailed) N	0.362 0.000 300
Environmental quality	Pearson's correlation Sig (2 tailed) N	0.527 0.000 300

4.7. Significant variables influencing satisfaction of open space.

Regression analysis is done to further compare the implications of respondents' socio-demographic variables (gender, age, income, economic activity status, flat size), perceptions and evaluations of physical and social qualities of open space (attitude towards others in open space, crowding, interaction, social value, provisions, aesthetic quality, maintenance, environmental quality, safety at day, safety at night, privacy, travel time) on respondents' satisfaction of open space to predict the effects of individual predictor variables.

4.7.1. All cases combined (Case 1, 2 and 3)

The goodness of fit is fairly high with R square=0.399, meaning 39.9% of variance in the dependent variable 'satisfaction of open space' is expected by the independent variables included in the model, see table 2.

Table 2. Model Summary-all cases

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.631(a)	.399	.360	.609

ANOVA results of S=0.000 and F=10.318 indicate that predictors (independent V) have a significant regression relationship with the Dependent, see table 3.

Table 3. ANOVA results-all cases

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.872	18	3.826	10.318	.000(a)
	Residual	103.837	280	.371		
	Total	172.709	298			

Co-efficient results show that privacy (S=0.002), maintenance (S=0.002), environmental quality (S=0.000) stands out as significant positive predictor for satisfaction of open space. The Standardized Beta Co efficient for the significant variables are respectively 0.154, 0.182, 0.328 indicating that increase in privacy, maintenance and environmental quality of the space has a strong positive influence on satisfaction of open space, see table 4.

Table 4. Regression Model- All cases

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.066	.460		2.315	.021
	TTIME	-.058	.041	-.070	-1.421	.157
	PROVISIONS	.070	.045	.090	1.557	.121
	SAFEDAY	.015	.058	.013	.262	.793
	SAFENIGHT	.025	.037	.033	.685	.494

OTHERS	-.005	.030	-.010	-.173	.863
CROWD	.030	.032	.049	.949	.343
PRIVACY	.092	.029	.154	3.204	.002
INTERACTION	-.027	.038	-.047	-.719	.472
SOCIALISE	.034	.034	.051	.989	.324
MAINTENANCE	.132	.042	.182	3.126	.002
AESTHETIC	.090	.056	.092	1.604	.110
CLIMATCOMFORT	.271	.049	.328	5.497	.000
GENDER	.018	.077	.012	.241	.810
AGE	.045	.026	.126	1.750	.081
INCOME	-.064	.089	-.042	-.722	.471
EDUCATION	.039	.075	.033	.519	.604
ECONACT	.012	.046	.018	.252	.801
FLATSIZE	-.063	.060	-.056	-1.053	.293

a Dependent Variable: OVERALLSATIS

4.8. Significant differences in frequency of use of open space across socio demographics of respondents

The mean differences of frequency of use of open space (no of visits per month) is highly significant at p<0.001 level for age (S=0.000), income level (S=0.000), education (S=0.000), economic activity status (S=0.000), flat size (S=0.000), household size (S=0.000), leisure preference (S=0.000) and leisure time (S=0.000). But results show no significant differences in frequency of use across gender (S=0.210).

4.9. Correlations on frequency of use

Bivariate Correlation shows that increase in age and time for leisure has positive correlation on frequency of use. While increase in income levels, education levels, flat sizes, household size have negative correlation on frequency of use.

Bivariate Correlation analysis shows that increase in safety in open space at day time and night time, relationship to others in open space (stranger, friend or neighbour etc) crowding, interaction with others in open space, maintenance and overall satisfaction with open space has significant positive correlation on frequency of use. Also increase in travel time to open space has significant negative correlation at 0.01 levels (two tailed), see table 5.

Table 5. Correlations – frequency of use

Variables	Correlations	Frequency
Age	Pearson's correlation Sig (2 tailed) N	0.459 0.000 300
Income	Pearson's correlation Sig (2 tailed) N	-0.337 0.000 300
Education	Pearson's correlation Sig (2 tailed) N	-0.321 0.000 300
Flat size	Pearson's correlation Sig (2 tailed) N	-0.330 0.020 300
Household size	Pearson's correlation Sig (2 tailed) N	-0.367 0.020 300
Leisure time	Pearson's correlation Sig (2 tailed) N	0.396 0.020 300
Safety-day time	Pearson's correlation Sig (2 tailed) N	0.135 0.020 300
Safety-night time	Pearson's correlation Sig (2 tailed) N	0.130 0.024 300
Relationship with others	Pearson's correlation Sig (2 tailed) N	0.304 0.000 300
Crowding	Pearson's correlation Sig (2 tailed) N	0.124 0.032 300
Interaction with others	Pearson's correlation Sig (2 tailed) N	0.336 0.000 300
Maintenance	Pearson's correlation Sig (2 tailed) N	0.204 0.000 300
Overall satisfaction	Pearson's correlation Sig (2 tailed) N	0.156 0.007 300

4.10. Significant variables influencing frequency of use of open space.

Regression analysis is done to further compare the implications of respondents' socio-demographic variables (gender, age, income, economic activity status, flat size), perceptions and evaluations of physical and social qualities of open space (attitude towards others in open space, crowding, interaction, social value, provisions, aesthetic quality, maintenance, environmental quality, safety at day, safety at night, privacy, travel time) on respondents' frequency of use of open space (is an indicator for demand for open

space) to predict the effects of individual predictor variables on open space demand.

4.10.1. All cases combined (Case 1, 2 and 3)

The goodness of fit is fairly high with R square=0.420, meaning 42% of variance in the dependent variable 'satisfaction of open space' is expected by the independent variables included in the model, see table 6.

Table 6. Model Summary-all cases

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.648(a)	.420	.374	33.046

ANOVA results of S=0.000 and F=9.133 indicate that predictors (independent V) have a significant regression relationship with the Dependent, see table 7.

Table 7. ANOVA results-all cases

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	219409.115	22	9973.142	9.133	.000(a)
	Residual	302492.122	277	1092.029		
	Total	521901.237	299			

Co-efficient results show that time for leisure (S=0.000) stands out as only most significant predictor for frequency of use. The Standardized Beta Co efficient for this significant variable is 0.205 indicating that increase in time for leisure has a strong positive influence on frequency of use of open space, see table 8.

Table 8. Regression Model-all cases

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-23.003	25.330		-.908	.365
	OVERALLSATIS	-2.608	3.415	-.048	-.764	.446
	CROWD	2.591	1.754	.075	1.477	.141
	GENDER	8.277	4.207	.096	1.967	.050

SAFENIGHT	3.259	2.033	.078	1.603	.110
SAFEDAY	-.058	3.151	-.001	-.018	.985
SOCIALISE	.893	1.845	.025	.484	.629
PRIVACY	-3.504	1.613	-.107	-2.172	.031
LEITIME	10.717	2.814	.205	3.808	.000
OTHERS	2.771	1.616	.095	1.715	.087
EDUCATION	-3.153	4.124	-.048	-.765	.445
AESTHETIC	-1.098	3.065	-.020	-.358	.720
INCOME	-5.445	4.814	-.065	-1.131	.259
PROVISIONS	-2.387	2.470	-.056	-.966	.335
LEIPREF	-3.063	2.326	-.081	-1.317	.189
MAINTENANCE	3.946	2.352	.100	1.678	.094
ENJOYTIME	2.224	3.123	.053	.712	.477
CLIMATCOMFORT	-2.286	2.932	-.050	-.780	.436
AGE	2.723	1.428	.137	1.907	.058
DURATION	2.545	1.323	.138	1.923	.055
INTERACTION	1.050	2.158	.033	.486	.627
ECONACT	.790	2.864	.022	.276	.783
WORTHTIME	1.370	3.084	.036	.444	.657

a Dependent Variable: FREQUENCY

5. Conclusions

Within a high density setting the perceptions and use of open space differs across each case and open space. Majority of respondents have time for leisure everyday and prefer to use open space, either inside or outside the estate. Only a small proportion of respondents prefer alternatives like shopping mall, cinema and restaurants or prefer to stay at home. It is also found that a minority use open space for social activity majority use as an optional activity. As learnt from the interview discussions the main purpose of visiting the open spaces were to get away from tight space at home, to relax and while away their time rather than meet with friends. These observations represents the leisure patterns of income groups less than 10,000, with education levels less than secondary levels, residing in smaller flat sizes of less than 50sq.m and small households of 1-3 members and belong to a economically non active group.

Open space satisfaction differs across age, income, education, economic activity status and flat size, but does not differ among male and female. Higher age groups have higher satisfaction levels of open space but higher income, education, flat size, house hold size groups have lower satisfaction with open space.

Increased satisfaction with open space provisions, safety at day time and night time, relationship to others in open space (stranger, friend or neighbour etc), privacy, interaction, maintenance, aesthetic quality and environmental quality of open space are important factors influencing satisfaction of open space. But most critical influencing factors are privacy, maintenance and environmental quality of the open space. This outlines the critical variables that need to be considered for optimum satisfaction of open spaces in high density low income neighbourhoods.

Respondents of higher age groups socially interact with others in open space more than the lower age groups. Higher income, education levels, and respondents from larger flat sizes and households interact less with others in open space compared to those with low, income, education, flat sizes and households. Increase in overall satisfaction levels, better aesthetics, and environmental quality of open space induces better social interaction. As discussed above satisfaction of open space is positively influenced by improvements in open space provisions, safety at day time and night time, relationships with others in open space (stranger, friend or neighbour etc), privacy, interaction, maintenance, aesthetic quality and environmental quality by ample shading, trees, less noise and pollution. This concludes a series of critical variables that needs to be considered for encouraging social interaction in open space. Although crowding is claimed to be a negative quality of open space, higher interaction values are observed in open spaces evaluated as high in crowding levels.

The use of open space differs across age, income, education levels, economic activity status, flat sizes and household sizes. But use of open space does not differ across gender. Also higher age groups and those with more leisure time will have high frequency of open space use. Also higher income, education levels, and those living in higher household sizes and larger household numbers have lower frequency of open space use. Therefore the demographic and socio-economic profiles of a development such as the age, income, education, flat size, household size distributions are considered as good indicators of the expected open space demands and use within that development. But the most critical influence on open space use is time for leisure, which is also explained by the demographic and socio-economic backgrounds of occupants, it could be said that high income and education groups will have less time for leisure and less demands for open space use.

高密度，多功能住宅区开放空间的使用研究-以香港为例

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摘要

开放空间在香港这样的高密度社区中非常重要。它连接社区，缓冲互不兼容的使用功能，其中的自然元素有助于控制洪水，汇流地下水，支持生物多样性，并为居民提供景观，社交，娱乐等功能。

本文探索了居民和访客对于上述开放空间的感知，和对使用的影响。针对两个高密度居住区中的三个开放空间的使用进行了 120 份问卷调查。开展了质化和量化分析研究以获得关于开放空间感知和使用的有用的讨论。研究显示了四种使用模式，并发现高密度混合功能有助于不同阶层使用者的组合。不同使用者的使用强度和感知度差别明显。深入研究发现拥挤被视为一种负面

特征，其与社会交往有显著关联。上述发现局限于大部分受访者为女性，月收入在 8000 元以下，15 到 40 岁之间。该研究同时只限于香港两个高密度私人住宅区。后续研究将在游人和公共居住区中合理选择分布均匀的样本进行研究。

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