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**A Quality of Life Assessment to
Improve Urban and Housing Policies in Chile**

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Introduction

The Chilean housing and urban development process has generated social and environmental conditions which make quality of life (QOL) unequal and inequitable for the different groups of its population. Housing policies over the past decade have made considerable efforts to reduce the housing deficit and have managed to contribute to the construction of over 100,000 units yearly, an impressive figure in comparison to other Latin-American nations, especially considering the country's population. Though the construction quality has improved over the past few years, it is not yet considered optimal, and current policy orientations require a strong shift in order to effectively improve the quality of life of the Chilean population.

The Chilean Housing Ministry has included the provision of a better quality of life for all Chileans as one of its priorities. This initiative seems commendable, considering that the notion of QOL involves a series of factors that could contribute to overcoming some of the endemic deficits in cities. These deficiencies are generated by a series of conditions including the lack of co-ordination between urban and housing policies and the lack of common objectives for both. Additionally, the situation is made worse by the persistence of partial and sectorial approaches, separating housing from other social and

territorial policies, as well as centralist interventions that tend to dismiss regional and local initiatives and decision-making. Moreover, targeting policies are generally myopic to the complexity of poverty, wasting important resources on parallel efforts. At a city level, the lack of consideration of the segregational impacts that housing location can have on city dwellers exacerbates the perception of poor QOL in Chilean cities.

Though the initiative to provide better QOL is presented as promissory, the approach being applied in Chilean housing and urban policies and strategies does not necessarily reflect the holistic quality inherent to the concept of QOL. In reference to this notion, one observes two basic aspects being neglected. On one hand, the physical conditions of the surroundings are given priority over those stemming from environmental, socio-cultural, human and economic aspects of quality of life. On the other hand, only the objective conditions of this notion are considered, leaving as secondary, or in most cases ignoring, the subjective perception of QOL of those who living it. The imprecise knowledge of the state of citizens' quality of life, due to deficient information, insufficient analysis of existing data, and lack of assessment of the above-enunciated priority, makes it difficult to take informed action on the central issues at stake.

This paper is based on the final results of a three-year research¹ project to assess the Quality of Life of various communities living in low to medium income multi-storey complexes in Greater Santiago. The cases correspond to three different subsidised housing programmes targeted at diverse socio-economic groups. The methodological process includes the analysis of information from the various factors and indicators of quality of life relevant to the inhabitants of the settlements studied. It also relates this analysis in an objective (how were they in concrete terms) and subjective (how were they perceived)

¹ FONDECYT financed project N° 1000414/2000 "The Triad Quality of Life-Gender-Environment", see www.calidaddevida.uchile.cl

manner. This process of relating the information was completed using a combination of qualitative and quantitative methodologies.

Using the results of this research, this paper intends to provide an explanatory diagnosis of the situations detected *within* each of the communities being studied and *among* the different communities in terms of quality of life. From this, it aims to identify the critical areas of QOL at a residential, communal, and city level. It also intends to make a contribution to the study and discussion of QOL from a holistic perspective and at conceptual, methodological, and policy management levels. These suggestions can be particularly useful in the assessment of quality of life to improve (or implement) the current (or future) monitoring and evaluation the performance of the Chilean urban and housing sector, as well as that of social policies as a whole. The Chilean example can be considered relevant given the current context and the use of this model in other countries in the Latin American Region. These suggestions can be seen as a way of eventually improving QOL of urban inhabitants, particularly the lower income ones, who depend on government policies and who constitute a large percentage of the cities' inhabitants.

Housing Policies in Chile

Today, Chile is seen as a positive example to the world, since its macroeconomic policies have proved to be solid and consistent and they provide undoubted economic growth to the country even in times of serious crisis in the country and Region. Not only have macroeconomic policies been successful, but innovative initiatives or policies have also taken place, as is the case of the signing of free trade agreements, concessions contracts in public works reforms in the pensions system, education, health, labour laws, telecommunications, energy, or judicial system, amongst others. Parallel to this, the private sector also underwent important changes, becoming over the past 10 to 15 years a role model in terms of business deals in the Region. Chilean society has also experienced important changes or

evolutions, particularly since the end of dictatorship. Whether the modifications of Chilean ways are positive or negative is not the topic of this paper; however, they are mentioned as indicators of how quickly Chile has been evolving over the past few years, incorporating many aspects of “modernity” and being emulated by its neighbours. However, little is being questioned in terms of whether Chilean people are living better than before, or whether they have improved their quality of life over the years.

One of the most analysed, researched, discussed, and copied policies of this “new” Chilean process is its housing policy. This policy was considered revolutionary in its time due to the vanguardist way of approaching the housing problem, through demand-side subsidies, at a time when supply-side ones were the norm and self-help housing and housing upgrading were the most important types of interventions. The application of the housing model is impressive in terms of its magnitude and continuity, serving as a model for the rest of Latin American countries including Colombia, Mexico, and Costa Rica, amongst others. These countries are attempting to import this model either fully or partially, recognising its efficiency in Chile and the potential; however, seldom are the flaws examined and critically considered.

One of the main achievements of the Chilean government in the last decade was an impressive increase in the housing construction rate (approximately 100,000 units per year, until the end of the last decade). This controlled the housing deficit and allowed the government to concentrate on diminishing it through leveraging public resources with private ones, using a sound financial system.

The success of this housing policy has been counter-balanced by some problems. On the one hand, a significant number of housing units have been built, and a consolidated financial system that is admired and adopted by many Latin American countries has been established. Furthermore, the policy has set

up a complex system that permits people to wait in a housing queue². However, the policy continues to leave few location options for the urban poor. The construction focuses on new housing developments that have mainly been built in the urban periphery where land costs are lowest, thus promoting a rapid process of urban expansion. The peripheral setting of these units, as well as the size of the complexes causes serious problems, both to the residents' quality of life as well as to Santiago's overall quality of life. Today, social housing is only available in a few very distant areas of Metropolitan Santiago. However, given that the externalities of building on the periphery are never internalised, the allocations for these new developments fail to include the costs of new transportation networks, distance, time, equipment, services and infrastructure (Edwards, 1995) and the consequences of over-concentration of families with high vulnerability rate in excluded areas.

In general, housing and urban policies and norms in Chile over the last two decades have generated a process of continuous physical expansion. This has created greater urban and social segregation, an increase in the disparity in access to urban services, a worsening of local living conditions, increased environmental contamination, urban security problems, and the deterioration of urban and historic centres. Given that all these policies (particularly for housing) are decided by the central government, urban residents, especially the urban poor, have little option but to reside in the outskirts of the city. Furthermore, many critiques have been issued in terms of the right to the city, as the housing application procedure does not provide equal opportunities to everyone, increasing the, until now, halted illegal land invasion process. Those who enter the system present physical and social exclusion and this causes a continuously deteriorating QOL, those who do not enter the system wait for years or choose to invade land. Over the past few years, the government has recognised some of the

² In Chile, access to housing is a shared effort from the people (via saving), the state (via subsidies) and the financial market (via mortgage credit). The promotion and programming of projects as well as housing construction corresponds to the private sector (Etchegaray, 1993). In this context, housing policies enable the state as an assignor of subsidies and the market as the constructing agent. The government has set up various subsidised programmes to access housing, using demand side subsidies to fill the affordability gap (Jirón, 1995).

deficiencies in the housing policy, mainly in terms of the construction quality, the need to target more accurately on very low-income groups and the need to include location costs in the cost of housing. However, much still needs to be perfected in terms of understanding the housing process as a whole; that is, incorporating the real social needs inherent to the problem and providing integral social policies.

Recent problems have also indicated that the current housing policy is at its end of its life span, given that participation is still not included in the system, the application procedure is segregationist and the resulting city has become increasingly chaotic. In order to examine each implication in detail, the application of three programmes included in the Chilean housing policy are analysed through a QOL perspective.

Quality of Life Concepts and Methodology

Through the assessment of projects resulting from three Chilean government programmes, the following analysis determines the main flaws and possible recommendations at various levels including project, programme and policy as well as local, communal or metropolitan and finally in terms of its possible replicability.

Due to the factors that determine quality of life (QOL), it is a difficult concept to apprehend, define and measure, and thus it can take on different interpretations (Brock, 1996). Though QOL and environmental quality can seldom be confused, they are not identical: as there are elements of happiness that come from the interior or the individual, and there are people that are happy even in the worst conditions and others than cannot be happy even in the best ones.

The concept applied here does not limit itself to the “private life level”, but integrates all the elements, objective and subjective, of the conditions in which people live in an urban community, both their needs as well as their perceptions, expectations and satisfiers. It represents a way of assessing well-being, satisfaction or happiness of –people (Fadda and Jirón, 2001; Fadda et al., 2000; and Jirón et al., 1999).

Furthermore, and given that communities are not homogeneous in the satisfaction of the needs of individuals in terms of gender or age, amongst others, the concept here presented incorporates the different social roles given within communities. As long as human beings perceive their problems and possible solutions from different points of view, according to their respective social roles, and satisfy their needs under different criteria, a given experience or the same physical object can be perceived in different forms by different subjects (DPU, 1997). This means that a certain quality of life in an environment can imply very different characteristics, perceptions and images for different people, depending of gender, age, culture, ethnicity, religion, etc.

Lastly, environmental problems are not understood only as problems of our physical surrounds, but, due to their origins and consequences, as social problems: problems of people, their history, their living conditions, their relations with the world and reality, of their social conditions (Beck, quoted by Allen, 1999). Similarly, the housing process cannot be associated exclusively with the physical unit alone, as it requires an integral analysis of the relation between the inhabitant and their habitat. This habitat includes the different scales in which people live (housing unit, surroundings, neighbourhood, city) and the various relations they form (family, neighbours, community, citizens). This makes the housing process more complex, but also richer as it understands that for human beings to experience their quality of life at a residential level one must include this integral vision to it.

In summary, QOL assessed like this, constitutes integrating the results of all the –subjective and objective – factors that condition the well-being of people in an determined environment. As such, it becomes a trustworthy indicator for urban and housing planning and management.

The following section presents the results of the application of such a concept in the evaluation of QOL from groups living in three types of social housing built by the government in 1998³. In order to capture the subjective/objective complexity of the concept, different instruments were used to provide such information including: a perception survey, discussion groups, interviews, photographic record by dwellers, morphological analysis of the complexes, and secondary objective information at the district and city level. The survey was the main instrument, and the other instruments complemented the results⁴.

Quality of Life Assessment

In an attempt to evaluate Quality of Life of social groups living in low to medium income multi-storey dwellings, the research “Comparative Study of the Quality of Life-Gender-Environment Triad”⁵ analyses three urban communities in Greater Santiago. The chosen cases correspond to three different subsidised housing programmes targeted to groups with different socio-economic characteristics.

Cases Studied

The three cases were selected based on various criteria, including socio-economic level of the target population; the condition that each case belongs to a government programme⁶, to make suggestions within the public policy domain; and a minimum of two-year residence from the dwellers in order to

³ The study “Comparative study of the quality of life” involves inter and intra comparisons of three government subsidised housing programmes in Santiago de Chile.

⁴ For a discussion on the methodology see Fadda and Jirón 1999; Fadda and Jiron, 2003; Jirón et al, 2003

⁵ FONDECYT financed project N° 1000414-2000

⁶ For further information regarding the implications of the Chilean housing policy see Fadda & Jirón 2000

have a sense of belonging to the housing. The selected cases, in order from lower to higher socio-economic situation are as follows:

Chile Barrio Programme, started in 1997, aims at improving the living and working conditions of the families and communities living in the 972 informal settlements (*campamentos*) existing in the country⁷. The original aim of the programme included an integral approach to poverty.

The case selected from this Programme, *Oreste Plath Complex* was built in 1998. Located in the district of Cerrillos, it is made up of 767 housing units with approximately 3,835 dwellers, half of whom did not belong to the original informal settlement and applied to housing through the regular process. The units are distributed in three-story building blocks ranging in size from 39 to 47 m², costing is 385 UF⁸ (US\$ 9,625) each. The population under study resided for over 10 years in an informal settlement close by.

In terms of facilities, it is observed that the commercial activity surrounding the development is of local character and retail, that is, for satisfying basic needs of neighbours. Some of these activities, including shops and bakeries, have been installed within the complex itself, particularly informal extensions made to the housing units, mainly on first floors. Additionally, the complex has its own community hall and a childcare centre; public and municipal schools are close by. However, a lack of regional, communal and local services can be observed, including health (health offices or hospitals) or security. The complex also lacks sports courts for public use, and though the green areas around the complex are in good shape, due to its peripheral location, the community rarely uses them.

⁷ In 1997, a national cadastre was made to count and characterise the existing informal settlements (*campamentos*) with over 20 households. For further information see INVI-MINVU, 1997, "Catastro de campamentos y asentamientos irregulares. Cartografía nacional por Región. Informe Final", Universidad de Chile, Facultad de Arquitectura y Urbanismo, Instituto de la Vivienda: Santiago

⁸ UF is an inflation indexed currency. 1 UF = US\$25

In terms of the road structure there are structuring roads which connect residents to the downtown area. Other vehicle circulation arteries, adjacent to the complex, connect them to the rest of the district and closer the urban surrounding. There is also a green pedestrian walk ways located within the 500 m radius.

The overall aspect of the complex is greatly affected by the informal appropriations of common spaces. The strong deterioration of the complex is greatly due to the low quality of these extensions, with similar construction to those in informal settlements. In general, they correspond to extensions on first floors, used for storage of materials owned by the dwellers in their previous housing. There are appropriations and closures in the stair cases, used to hang clothes. This excessive amount of extensions has limited the possibility of circulation and visual control.

The most negative aspect of this complex is related to the vulnerability and poverty of its population. Due to its origin, the level of this group's vulnerability⁹ is high, 65.4% of the population in under the poverty line. Debt capacity is low due to the informality of employment, and most dwellers have pending debts and due to the precariousness of their income, the possibility of saving is also minimal.

The main existing problems, according to residents' perception, are related to crime, drug addiction, alcoholism, and high rates of high school drop-outs and teenage pregnancy. This situation affects both citizen safety as well as fear of what the future beholds for the children. The deteriorated environment strongly impacts the perception of quality of life since, even if they are not directly attacked (robbed, insulted or threatened) they, particularly women, fear that their children will start taking drugs. Along

⁹ Here, vulnerability is defined by the per capita monetary income, quality of employment, quality of education, type of head of household, age of dependency and level of indebtedment.

these lines, residents feel that they live in a “dangerous neighbourhood”¹⁰ and authorities, including policemen, municipal workers or Chilebarrio staff are perceived negatively. There is a sense of abandonment and despair, which is attributed to the promised support that never arrived and authorities that never returned. Though the authorities efficiency is poorly evaluated, the assessment of its level of commitment is worse, particularly by men.

This situation has direct impact on the desire to leave the complex, as its poor image makes them ashamed of living there, plus they feel discriminated by the other non-Chilebarrio residents who have closed themselves off with fences and do not want any relationship with this group. They realise that it is possible to have a clean space; however, they show difficulty in working collectively as neighbours, as they used to. The spatial conformation of the complex does not make it easier to live there, as its morphology does contribute to social interaction. The architectonic typology does not have any formal relation with the territory where it is placed. Residual spaces with little illumination become unsafe, along with the existence of empty spaces. The quality of the immediate surroundings of the complex has a low perception in terms of peacefulness, security, cleanliness, privacy, noise, and beauty, which in all cases women evaluate worse than men. Transitions from public to private space do not favour aesthetically the complex. The setting of community spaces generates abandonment from residents. The complex design and the irregular placement of blocks generate residual spaces, that impact visual control and generate individual and indiscriminate appropriation of collective spaces, leading to a lack of privacy to first floors dwellers. Given the lack of space within the housing unit to hold activities such as hanging clothes or storage, or simply they are too small (less than 40m²), residents occupy collective space indiscriminately.

¹⁰ In Chilean slang, it is known as “choreste plath”, implying a rough neighbourhood.

Young adults appear as the most critical ones in terms of air contamination. The causes of contamination are similar to the rest of the city. However, this district is better evaluated than Pudahuel or Santiago. Furthermore, sonic contamination is also more critical among young adults. This contamination exists both within and outside the complex, however, the inside one is generated by screams, music in general which is exacerbated in interior patios as noise bounces.

This community perceives a low level of empowerment or participation in the decision-making process. This is related to the little consideration in the decision making at a block, complex, community organisations and municipality. At a domestic level of decision making, individual opinion is highly considered. Similarly, the high level of electoral registry demonstrates a high level of participation in mayor, parliamentarian and presidential elections. It is interesting to analyse the perception of scale of decision making power, meaning that for close decision like domestic ones and those that are very distant, perception is very high, whereas the level of decision making for the immediate surrounding is very low or null and this is where most of the conflicts are presented.

Possibility of recreation is related to the use of sporting and recreation centres and the use of green areas and parks. The worse evaluated, particularly women, are recreation centres, this group also evaluates green areas poorly, as these are perceived as a lack of infrastructure for children. Additionally, women mention lack of space for community work, however, this indicator reflects a need for places and activities for recreation. In terms of equipment, there are no courts, social community centre has little use, there is little formal commerce close by and there are no health services or hospitals near by.

As for positive elements, neighbourhood life is seen as positive, though young people are perceived as unfriendly. In general, this community mentions that they can related well with neighbours, however,

when they need to act collectively, make decisions, improve the surroundings, or have a clean complex, this friendliness is not translated into concrete actions this is when they mention that people are not committed to improve their habitat collectively, thus referring to the friendliness as superficial and individualistic.

In general, women are more critical than men. The main inequities, in which women have a more negative perception are in social problems, perception of authorities, territorial cohesion and acoustic contamination, spatial quality of immediate surrounding and in particular possibility of recreation. This latter is of great importance as the difference is significant and it is related with the little free time available as well as the few existing opportunities for recreation.

The *Basic Housing Programme* is one of the most important official programmes implemented in Chilean history, due to its permanence in time, the invested resources and number of housing units built. It was started in 1980 and in its first stage it aimed at solving the problems of informal settlement radication and eradication. In 1984 it broaden its objective to satisfy the housing need of low income families, *allegados*¹¹, or those in other housing marginality situations.

The case selected from this Programme, *El Cabildo Complex* is located in the District of Pudahuel, and holds 1,495 inhabitants in 299 housing units in three-story blocks built in 1998. The apartments have a surface between 39 and 47 m² and cost between 366 and 380 UF (US\$ 9,150 and US\$ 9,500) each.

Similar to the previous case, the commercial facilities adjacent to the complex are of local and retail character, meaning supplies basic products are supplied to the closer neighbours. This complex also has

¹¹ *Allegados* are those households that, due to economic or social circumstances share a housing unit or plot, and are usually greatly affected by overcrowding and promiscuity.

its own social community hall, located close to the whole community. In terms of education, though there is a school within the 500 m radius analysed, it belongs to the neighbouring district. In terms of sports, the complex contains well maintained courts for public use. The green areas located around the complex area in good shape and are commonly used by the community. However, there are no child care centres, public or municipal schools, neither are there health offices or hospitals. In general, the provision of services in pedestrian reach from the complex is basic and mainly related to commercial, sports and religious cult. The main shortage are in terms of educational and health facilities.

Road infrastructure is essentially made up of one structuring way that connects the residents to the downtown area of the city, perceived to be in good shape with vegetation in the central strip. Within a three minute walk outside of the 500 m radius, there is another structuring road with major public transport flow. There is also a pedestrian way, used for open air markets. A lack of walk way is observed within the complex as the peripheral fencing leaves it impenetrable and isolated from its surrounding road structure. In general, the location of the complex allows for access, though not very quickly, to the downtown area.

The overall aspect of the complex is seen to be affected by mainly by the marks of active deterioration such as micro waste disposals, fencing and graffiti, meaning deterioration caused by residents. Furthermore, the excessive use of fencing has limited the possibility of circulation, as well as of visual control of the surrounding.

Socio-economic vulnerability is medium to low here and there are great differences between sexes. The main social problems in this community include: illiteracy, drug addiction, crime, school drop out, and teenage pregnancy. The aspects that influence this perception the most are crime and drug addiction.

Opposite to this, aspects like expectation for children's future education and employment satisfaction that are assessed very well.

The district of Pudahuel has two of Santiago's flooding areas determined by authorities and it is one with the highest index of flooding in Greater Santiago. Within the neighbourhood of El Cabildo, there are no rain water collectors, or any drainage system that can provide a good absorption of water when it rains. This causes an environmental deterioration due to the accumulation of water and mud and the inundations of the neighbourhood streets are one of the problems residents claim as most being affected by. Most people have very negative perceptions when asked about the water drainage. Amongst those surveyed, the young, both men and women, are most critical about this with a very low assessment.

In terms of green areas, the standard suggested by the WHO is 14 m² per inhabitant. The District of Pudahuel is in the range of 4 to 5.9 m² per inhabitant. The area within the 500 m radius around the complex contains parks, green area, community centres, sporting infrastructure, and workshops. The recreational aspect was evaluated as medium low. The elderly are the only group that does not perceive these problems negatively. This aspect was evaluated as very low in terms of use of sporting centres and recreation. However, within the 500m radius, there are six courts, green areas, and a community centre, among others. Sporting facilities are directed specifically to men, thus the difference in perception between men and women.

Residents have a very poor perception of their authorities. Half of those interviewed consider that the Municipality does not solve the problems of their neighbourhood. In general terms, worse perception of women than men between the ages of 31 and 40.

Pudahuel is among the most air polluted districts of Santiago, and it presents the highest index of contaminating particles in pre-emergency days. Part of this pollution can be attributed to the 34 fixed sources located in the sector. This pollution has important effects that are health related, where 40% of the annual paediatric consultations respond to respiratory illnesses in this area. This community rates air pollution as very bad and the factor is worsened by the lack of road paving and the large number of buses.

The possibility of incurring debt is also rated very low and it is an important aspect to consider given that the possibility of accessing financial credit is quite available in Chile, except for those with very unstable employment or in high vulnerability. Thus the possibilities of improving their income situation via credit would be quite difficult. This is related to the low income levels (55% in the first quintile) and the payment of mortgage and service bills.

In general, the expectations for the future of their children in terms of education are high. They improve as the parents' education level and income improve. More than half of those interviewed (54%) hope that their children will reach university education and see it as the only thing they can leave, however, they know that their current budget will not be enough for this. Such aspirations reflect a positive intention to face the future.

Overall, employment satisfaction is a very well evaluated except by those retired, unemployed, women between the ages of 19 and 39, and those with a technical and university education who have a lower employment satisfaction. Street vendors and construction workers are those who best assess this factor.

Most of the residents feel their relations with neighbours is positive, some feel that initially it was better than as time went on, as today they do not use common spaces collectively and they perceive

lack of union among them. This would be more related to the lack of formal participation and scarce empowerment potential for this community.

Environmental hygiene is very well evaluated, though the perception is positive, they express some problems including the litter areas around and inside the channel, also the pollution and the infection focus caused by the water. The absence of plagues is the element that increased this scoring. The positive evaluation may seem contradictory with the poor evaluation made of air pollution, however, this aspect only evaluates plagues, and they mention channel's dirtiness as causing infections and close micro rubbish areas. Furthermore, physical safety is measured, among other aspects, by the perception of vulnerability to face natural disasters, fires and crimes. Though the existence of a channel causes frequent flooding and police and firemen within a radius of 500 metres are inexistent, the evaluation of this aspect is very good.

Urban Renovation Programme, provides housing subsidies to low to medium income groups who choose to live in central areas of cities (urban renewal predefined areas). This programme has become a decisive impulse to the recuperation of deteriorated urban centres process. In the case of the District of Santiago (downtown area), this Programme was linked to the local repopulation programme, aiming to consolidate its residential condition in order to bring people back to live in a deteriorating urban downtown area, to develop economic activities and increase the quality of life of the resident population of Santiago's neighbourhoods (Jirón, 1998).

Parque Blindados Complex is the case selected from this Programme and is located in the Santiago District. It holds 2,968 inhabitants living in 742 apartments ranging from 31 to 82 m², costing from 587 to 1300 UF (US\$ 14,675 to US\$ 32,500) each. Due to its downtown location, the area surrounding this complex is provided with a great variety and quantity of service facilities at a local and intercommunal

scale. This latter type generates concentration of vehicles that circulate around the neighbourhood and produce traffic jams of cars and people and an agitated and noisy environment that is not compatible with the residential use of the complex.

The three structuring ways communicate residents with the rest of the Metropolitan Area. The rest of the surrounding ways are roads that communicate with the rest of the district, are one way roads that conform a draughtboard urban plot. There is a great quantity and variety of public transport that provide an overall very good connectivity with the rest of the city, in an easy and quick manner.

In general, QOL is better perceived as the age intervals increase. Given that the programme is targeted to medium low income groups, its level of vulnerability tends to be reduced and represents a medium low. Within this qualification it must be noted that over 10% of women are in low vulnerability conditions.

In terms of air pollution, the monitoring stations indicate that air quality in this district has been quite negative over the years. Within the Metropolitan Area, Santiago is located in a second level of contamination. This greatly affects the residents of Blindados. The main road axes surrounding the complex are sources of contamination due to the vehicle flow and in particular due to public transport.

Women and younger people present a worse evaluation in terms of use of free time. Those over 50 and in particular those over 65, are less critical. This is related to the negative possibility of recreation, particularly in the use of sport and recreational facilities. Though the complex is surrounded by multiple services, there are no public or private sporting centres or recreation centres near within the radio of 500m. There is one open air court and a children playground, which clearly are not enough for

the whole community. There are green areas in the immediate surrounding but they are not used as the street flows and noise do not make it a place safe and pleasurable for leisure.

The use and availability of facilities is poorly assessed. This contrasts with the secondary information which recognises Santiago as one of the district with highest number of educational establishments, in health, services and commerce. On the other hand, within a 500 m radius there are multiple services and facilities. The negative evaluation can have direct relation to the occupational situation of those surveyed as most are employed which means they have little time to take advantage of the available facilities.

Saving capacity increases with age, though 46% of those surveyed can save, it is the worse evaluated aspect within the economic field. Low saving capacity can be attributed to the debts in other areas, like mortgage, commercial shops. As the number of members of a household increase, there is a worse perception of this field.

Women were those that most complained about the nuisance caused by noise. The noise index of this district is high, second within the Metropolitan region. Just like air pollution, acoustic contamination is directly related to the location of complex, as it is inserted within the urban frame with road axes with high presence of public transport, producing both air and acoustic contamination. Additional to traffic noises are the those caused by passer-by and young people from the complex, noises emitted from internal sources also produce contamination, as noise crashes perpendicularly to the walls and bounces producing reverberation, particularly in the central patios.

As for the positive aspects, these residents have high hopes for their children, their aspiration for children's education is very high, and this indicates that there is a positive hope that their children will reach a high educational level. Additionally, in terms of job satisfaction, the results are quite high, expect for men over 51 and women between 19 and 30 have a lower job satisfaction as do younger

people. Furthermore there are no perceived problems with environmental hygiene meaning that there are no plagues, indicates that the surrounding is clean and healthy regardless of the high urban density. There is adequate garbage disposal places and no micro rubbish areas. Also residents feel safe in terms of disasters, no fear of earthquakes, fire etc. Both aspect represent a positive value in living in a well conformed district that provides safety to people and maintains a clean environment. The positive evaluation seems contradictory its the bad air pollution contamination.

The best assessed index is related to access to the city and the district. The central location and good connecting points with good public transport surrounds the complex. Those living here spend much less time travelling on a bus compared to the rest of those surveyed.

Again, there is a good evaluation of neighbours. There is a good communication flow and the community leaders are recognised, that incentive people to participate and integrate. This is seen as a positive union among the groups. However, at a communal level, there does not seem to be an organisation capacity in the neighbourhood to manifest their opinions. Finally rain drainage does nor represent a problem here.

Analysis of Results

An overall analysis would provide that all three communities belonging to three different programmed targeted to different population present problems related to their QOL, some are common to all three, some are very specific to each community, some have metropolitan links in terms of causes and thus solutions and other are more related to the local or in some cases the project level. This means that some problems are directly linked to the housing policy itself, but most of them are linked to the relation, or lack of relation, between this policy and reality. It can be mentioned that the community

with worse evaluation of QOL is the poorest one, the one coming from informal settlement and where the Chile Barrio Programme was applied.

If analysed by scale, at a Metropolitan level it can be observed that common problems to the three communities, air pollution and perception of authorities. Santiago is the 8th most polluted city in the world. Though Cabildo is located in the worse district at a Metropolitan level, in terms of air pollution, this problem is global and generalised and it affects gravely all three communities. A metropolitan intervention is required not only through the environmental office and the decontamination plan, but given that it is a cross cutting issue, Transport Public works, health, etc must take part in it. However at a municipal level there would also be a series of features to improve contamination, as would be paving, norms for public transport, fixed sources, sectional plans, etc. At a central level, the housing sector decisions on low income housing location impact in terms of increasing the urban expansion.

In terms of authorities, the hostility is mainly focussed at a municipal level, save for the Oreste Plath which presented conflict with metropolitan or national authorities. This is mainly due to the fact that promises made prior to relocation may or may not have taken place. Housing policies do not respond to the local diversity or need and require to be complemented by local ones, as central level indications are difficult to translate locally, thus the need for housing policies to be applied through local institutions, be it municipality or other. At a local level, the poor evaluation refers to the concern and solving capacity the municipal representatives offer to the community problems. Thus participatory and empowering strategies require to be applied. This would require the necessary community organisation.

One of the poorest assessed elements in one of the communities refers to the flooding caused by lack of rain collector system in various parts of the city. This problem appears as particularly critical in one of

the cases studied, Pudahuel. Its causes are related to the natural conditions of land where developments are located, low and flood prone, as in the deficit of necessary structure: rain drainage network and paved roads. Though it is understandable that land for low income housing location needs to be cheap, dangerous locations or location in zones not apt for human habitation, unhealthy or muddy should be avoided. The quality of life consequences tend to be serious and the cost of improving such dysfunctions are eventually higher than if higher quality land and thus price would have been purchased. Water collectors are an urgent matter to resolve, since privatisation of sanitariums, such responsibility which used to be the state's has not been assumed by anyone, its current cost of setting up rain water collectors for the whole new periphery is very high and it will take up many years to resolve. This is none of the important lessons to be learned by our neighbouring countries.

A common negative element to all three communities include social problems, in some cases these social problems are attributed to the surrounding communities or the district as a whole and in other cases they come from inside the communities themselves, as is the case of Oreste Plath (OP) with 60% of its dwellers are unemployed, with high drug consumption, high school drop out and poor health, prostitution. Solving these problems is a major priority for the two lower income communities. This is because, in these cases, the social problems are exacerbated by placing diverse social groups that come with these problems together, they constitute a very difficult influence to block. This has direct influence on the citizen safety perception and as prevention measures, most dwellers fence their houses and complexes, a measure that is not very appealing even for the residents. These problems and their causes require to be handled at a from very local level to more global ones (metropolitan or national), through intersector plans and strategies.

At a project level, complexes' design should foresee the residential safety impacts in terms of visual control for instance. Community, neighbours and family, social problems become more accentuated in

Oreste Plath. Residents present serious problems such as crime, drug addiction, alcoholism, high school drop out, teenage pregnancy, are all problematic related to the groups vulnerability, in particular women, and the high levels of poverty have great influence on the sense of belonging with the place, residential safety, which they confirm as coming from their neighbours, make many of them want to leave, to go back to the precarious living condition they were prior to being relocated to the complex. On the other hand, the low perception of municipal and national authorities and the low perception of decision making makes this dislike for living in this place not only a matter of housing, but also mainly a social problem. This makes it necessary to enquire on ways to modify the transition of living in a precarious informal settlement, how to overcome poverty with measures that go beyond the obtaining of a social housing. This implies that those institutions working toward poverty alleviation, in particular those attempting to provide a roof, require a more integral vision in their interventions as the improvement of QOL toward which they are pointing to will not be achieved by the physical improvement of housing and its surrounding, which important as they are, require a social economic, psychological, cultural accompaniment, at various levels. The main recommendation towards the Chilebarrio Programme, though it has improved its interventions in housing development after OP, is that the integration of these factor in their management process. This also involves local government to articulate the diverse funding and capacity together with the target population in a participatory manner.

In terms of communal equipment, two of the communities indicate this aspect very poorly. In both cases this is related to a deficit in health offices, hospitals and commerce. Housing projects should contemplate the implementation of equipment and basic services according to the needs of the population to whom they are directed. In some cases, this supersedes the municipal action scope. Therefore, along with community equipment plans, there should be synchronized action with metropolitan and sectorial programmes. This does not necessarily imply new constructions, but

existing ones could be taken advantage of. This requires better decision making in terms of the location of each complex. Oreste Plath was the only case that qualified basis services very badly in particular in term of rubbish collection. This punctual aspect can be corrected at a municipal level.

In two of the cases, Cabildo and Oreste Plath, the possibility of recreation was perceived very poorly, mainly referring to the use of sporting and recreational centres. To address this problem, aside from increasing the provision of sporting and recreation centres, relates more with improving their use. This implies the promotion of events, not just sporting but also cultural and leisure and in particular to the maintenance of spaces.

In the case of Blindados, residents find little possibility of use of free time, it is important to analyse this further as this group has 2% unemployment, much lower than the metropolitan average. It is possible that due to their working hours they have little free time find few recreational activities within their district and find few attractive alternatives for their leisure time. As income increases and employment, the use of free time decreases. It seems important to highlight the importance leisure has in people's QOL. In general capital cities present high levels of stress, which become accentuated in central districts like Santiago. Furthermore, alternative free recreational activities (few of which are taking place in summer time) are also important to promote leisure as an important aspect of QOL.

The same two communities also poorly evaluate acoustic pollution. In the case of Blindados, the bothersome noises come from the interior as well as the exterior of the complex. In the case of Oreste Plath, noises are caused by people, indoor sanitary artefacts and very loud music. External ones are related to the location of complex close to heavy traffic roads with public transport and passer-by. The impact of noise is exacerbated by poor design, residential design should consider forms and space distribution to muffle noise. Furthermore, acoustic isolation in housing is never integrated into design

and materiality in these types of constructions. This is an extremely perturbed element in peoples QOL, venerated intimacy. On a more general level, external contamination could be regulated through transport and health office or through the location of the developments. Other aspects that are more difficult to regulate are cultural, educational or mutual deference among neighbours, gearing towards a more respectful community life.

In all three cases, residents manifest a very low saving capacity, independently of their socio-economic situation. Economic crisis makes people have more difficulty to save as the little available is used for living. It is interesting to note that the residents of Oreste Plath not only do they have very little capacity to save but also have very low income and very little capacity to incur debt, and those living in Blindados with a better income also have debt incapacity. Solution to this is difficult, as it requires an important improvement of the economic situation of the country but most of all in terms of income distribution.

The Oreste Plath community presents levels of insecurity that surpass the other communities, however the same residents agree that the main insecurity comes from their neighbours. While residential safety requires work from both sides, more control from police, but over all strong recuperation of young drug addicts and alcoholics. Youth require to regain the optimism towards the future as it seems to be lost. Though this is a problem which many youths in the country, it is estimated that the work needs to be done at a local level, from the municipality, increasing citizen participation and, in particular, direct work with the community through training, recreation, workshops etc.

Again OP is the community which worse assesses the physical condition of the surroundings, this is curious as their previous living conditions were the most precarious of all three groups. This can be explained in two ways, one that the expectations of the residents of OP were higher than the other two

settlements and also that effectively the physical condition are worse here. A morphological analyses shows that while the Blindados shows a better design in the complex, the other two present deficiencies in terms of residual spaces, blind walls, interior patios not properly resolved, green areas turned brown, and unclear space conformation and undefined borders. This requires design recommendations for future new housing developments. A better morphological solution does not necessarily involve higher cost. The specifications for these complexes should contemplate the diversity of needs of residents, including spaces for hanging clothes, storage, leisure, listening to music, parking, etc. Though much has been incorporated, there are still thousands buildings that make up the existing housing stock that require an improvement in physical as in social terms.

At a Metropolitan level, some of the positive elements can be seen as access to the city, basically good road infrastructure and public transport, leading to good connectivity to the rest of the city. This has contributed to an improvement to residents QOL. Therefore accessibility should be an important aspect to consider for housing location.

At a project level one of the positive aspects assessed by all is community life. This could be positive aspect when considering the collective strategies that could take place. However, when going further into this, the type of relations neighbours have are superficial and with little relation with specific collaborations. For instance, there is a lot of complaint about dirty, noise, screaming, disrespectful, disorganised and violent neighbours, but when decision making time comes, they feel their opinions are not considered. It would be interesting to translate this positive aspect into participative strategies to improve the complexes. In the case of OP, it would be of great interest to know more of the existing channels of decision making to influence better and improve their living conditions.

Employment satisfaction seems clear, even if not necessarily enjoying their work, people are happy to have jobs at a time when unemployment was rising quickly. In general, the residents of all three communities place great part of the future aspirations in their children and project a better life for them through education. At a national level, educational policies, educational services at a communal and local level should provide support for children not to drop out of school and ensure that education is provided for all.

Conclusion

As can be seen, the assessment is based on what the communities perceive as relevant to their quality of life and how they assess them and then compared to an objective analysis. From this it can be said that the lack of a good quality of life in Chilean housing projects is multicausal, however the responsibility is usually placed on one actor, the Ministry of Housing, which is partly fair, because the conception of the policy and its operationalisation does not contemplate that, due to the important and permanent impact housing policies can have on residents, its partial and sectorial and qualitative approach is no longer valid in Chilean current context. The lack of coordination of the housing and social policies including health, education, transport, urban planning, can no longer be considered acceptable and its consequences are clear. This influences the important impacts housing location and the consideration of the location cost, additional to land cost can have. Furthermore, over than twenty years from the offset of the policy it seems that its procedures in terms of selection, scoring, considerations are no longer applicable to Chilean situation. Finally, the continuation of the solving the deficit objective is no longer adequate in detriment of residential design as the relevance of improving spatial quality, can have an important incidence in improving the quality of life, if only people's experience were incorporated to it.

It seems that Chile has much to learn from other Latin American countries in terms of participatory approaches, local implementation of policies and improvement of residential areas, and remember that as a developing country it cannot misguide its resources. The shift in gear required is essential; it involves replicating the positive aspects at a local level, and bringing the positive elements of local development without losing the vision of an integral city as whole. Information seems crucial for assertive decision-making. Today, most information is disperse, inaccurate, dated or unavailable for all cities or areas. Also when information is available, it is not usually used for those who are making the decisions. Finally, there is very little information on inhabitants' perception of how they experience living in urban residential areas and unless this is taken into consideration housing, urban or social interventions, will not adequately respond to citizens needs.

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