

## **CASE STUDY: SHANGHAI XUHUI DISTRICT FAMOUS POPULAR SCIENCE EXPERTS SERIES WORKROOM**

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### **ABSTRACT**

In order to accelerate the bilateral and interactive propagation of science through governmental involvement, and to promote science popularization as a social initiative, as well as to construct a scientific and cultural atmosphere, Xuhui district has proposed the setting up of “Famous Popular Science Experts Series Workroom”. Through the selection among the popular science volunteers with outstanding performances and relatively high influence in both the professional and social fields those chosen will have a workroom named after them. Together with the formation of a work team, putting research into practice, and to expand original scientific achievements, it is hoped to form an effective work structure in this area. This is done with the intent to provide the popular science volunteers with both a good condition and atmosphere for them to progress in their works, as well as to provide community residents a convenient channel to access these expertise and finally to allow more people to participate and propagate scientific technologies. This article uses a case of “Dr Liu (Suzhen) Psychology Sunshine Workroom” to probe into the working model of a community psychology experts in the area of science popularization.

### **KEYWORDS**

Community Science Popularization, Expert Workroom, Psychology, Bilateral and Interactive Propagation

### **INTRODUCTION**

One of the important objectives of science popularization is to build a society that promotes science and culture. It is to enable the public to view and deal with issues from a scientific point of view and realism. The popularization of science should be the responsibility of the entire society, and the initiatives from all scientific propaganda organizations should be tapped upon. Although there had been academics who contended that it was wrong to rely on the government as the driver behind scientific propagation, or even the main force behind all scientific propagation efforts [1], the role of the government is nevertheless important, in the current actual popular science effort, with an obvious transformation of its role in scientific propagation. In the area of scientific propagation, the government should be more active in protecting the interests of the region and the nation by stipulating scientific propagation plans as well as reward mechanisms in order to ensure the smooth implementation of such propagation. The

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government should also adopt a series of initiatives to accelerate professionalism in scientific propagation, and to integrate the scientific propagation resources from the society in order to drive the development of the scientific propagation works [2].

Both the Science and Technology Committee under the Xuhui district government and Science and Technology Association have come together to fully utilize the abundant scientific human resource within the region to launch a widespread popular science initiative with the help of the scientific workforce. In 2002, Xuhui district was the first in Shanghai to launch a regional Popular Science Volunteer's Association under the aegis of CAE Member Weng Shilie. There were 16 sub-groups under this association with the institutionalization of a volunteer "1+48+1" science popularization service model (to wear a volunteer badge, to endeavor the accumulation of 48 hours of service per year, and to participate in a volunteers' training). From this initiative, a batch of excellent popular science volunteers and experts has been identified.

In order to transform the popular science from an all-mighty one-way transmission process to a bilateral and interactive process where the public can better understand and accept science as well as to learn from practice [3], Xuhui district had continued to build on its existing foundation and proposed in 2004 the naming and work plan for the "Popular Science Experts Series Workroom". "Dr. Liu (Suzhen) Psychology Sunshine Workroom" was the successful example promoted in this mode, conducting psychology knowledge popularization in urban community.

## **THE SCIENCE COMMUNICATION PROCESS**

### **Project Design**

In order to accelerate the bilateral and interactive spread of science through governmental involvement, and to push popular science as a social initiative, as well as to construct a science and cultural atmosphere, Xuhui district has formed the Xuhui District Popular Science Experts Series Workroom. Well known science experts with outstanding performances and relatively high influence in both the professional and social fields will have workrooms named after them by way of application or by way of nomination, through authorization from the district Science and Technology Association and the district Popular Science Volunteer Association. This initiative was carried out with the intention to raise the awareness in science, to allow more aspiring volunteers to join in the work and to allow the community a convenient way to enjoy such expert services.

In the society featuring competitions and development, psychological health has become one of the most important topics for the people besides physical health. The psychological health of the entire society is the foundation of a harmonious society. Harmonious societies require harmonious communities, and both the physical and the psychological health of a resident are equally important factors in constructing harmonious communities. If everyone could maintain good psychological health, then there would be a basic guarantee for a harmonious community and society to be formed. Unfortunately, consultation on psychological health and the popularization of psychological knowledge are insufficient in China, even in the large cities like Shanghai. Therefore, psychological health must be monitored. "Dr. Liu (Suzhen) Psychology Sunshine Workroom" was thus set up to serve such a purpose.

The Dr. Liu (Suzhen) Psychology Sunshine Workroom, which serves as a tie between residents and the government, is positioned under the following 3 aspects: 1) Public Welfare: A psychological health foundation may be set up under the leadership of the community psychological health and development committee to add fresh blood to the work, further research and create a favorable atmosphere for development. 2) Socialization: A community psychological emergency and early warning system may be set up on the basis of the community psychological information service network to serve as the safe valve and network for stabilizing the residents' psychology. 3) Knowledgeability: With the workroom as the base and the community psychological health and development committee as the technical support, a "think tank" and knowledge database (information, human resources, and methodology databases) system can be set up jointly by the government and psychology and sociology experts.

### **Project's Implementation**

Dr. Liu Psychology Sunshine Workroom consisted of a team of psychology experts who are all popular science volunteers, and are professionals in their fields. The volunteers of this workroom come from different walks of life, including 15 teachers, 4 doctors, and 10 social service personnel. 33 of the 34 volunteers have won the National Psychology Consultant certification. Although the team keeps growing, it has already shown that it would add an authoritative element for the psychology sunshine workroom as a public service network. It is also apparent that the growing support and guarantee from different resources are indeed based on farsighted thinking.

#### **The Framework of the Workroom and Its Functions**

Since the setup of the workroom, tremendous and effective work has been done by the members on the popularization of psychological health knowledge. The spread channels have been well established within the community. Take Dr. Liu as an example: she found out through practice that the family was an important factor in personal psychological health and that the community residents had considerable knowledge blind spots in the areas of physical and mental health. Under her leadership, the volunteers from the workroom have stepped into the community to provide psychological consultation and popularization services. They often shutter within the neighborhood, spreading psychological knowledge through consultations, seminars, trainings etc. Under the leadership of the workroom's team of psychology experts, the neighborhood psychological health popularization work of the workroom has developed to be a 6-level network, bearing responsibilities in different areas.

**Table 1.** *Psychology Sunshine Workroom Healthy Community Main Office Network Framework and the Position of its Functions*

Organization Structure	Configuration of Structure	Service Target	Work Nature
1 <sup>st</sup> Level Platform	Dr. Liu Psychology Sunshine Workroom	Residents, Psychology Workers	<ul style="list-style-type: none"> <li>● Advise on the Overall Design of Community Psychological Health;</li> <li>● Set up Community Psychological Health Alert System;</li> <li>● Training of Community Service Personnel;</li> </ul>

			<ul style="list-style-type: none"> <li>● To Resolve Difficult Problems;</li> <li>● Supervisor Community Psychological Counseling Works.</li> </ul>
2 <sup>nd</sup> Level Platform	Neighborhood Psychological Health Development Committee	Residents, Psychology Workers	<ul style="list-style-type: none"> <li>● Design Neighborhood Psychological Health Work-plan and Implementation;</li> <li>● Set up of Community Psychological Health Volunteer Teams;</li> <li>● Establish Neighborhood Alert Hotline.</li> </ul>
3 <sup>rd</sup> Level Platform	Zone Residents Psychological Health Knowledge Popularization Station	Neighborhood residents	<ul style="list-style-type: none"> <li>● Advise on Psychological Health works according to the characteristics of the neighborhood;</li> <li>● Establish Alert Stations;</li> <li>● Confirm Group and Important Cases</li> </ul>
4 <sup>th</sup> Level Platform	Residents' Psychological Health Station	Residents' Committee Residents	<ul style="list-style-type: none"> <li>● Intervention of Family Systems' Psychological Makeup;</li> <li>● Advise on Group Counseling Activities;</li> <li>● Early Assistance on Special Individuals;</li> <li>● Establish Alert Points.</li> </ul>
5 <sup>th</sup> Level Platform	Building Residents' Psychological Health Point	Building Residents	<ul style="list-style-type: none"> <li>● Psychological Health Knowledge Popularization and Promotion;</li> <li>● Management of group activities,</li> <li>● Organize alert personnel.</li> </ul>
6 <sup>th</sup> Level Platform	Family Psychological Health Account	Residents	<ul style="list-style-type: none"> <li>● Establish Family Psychological Health Record</li> </ul>

Taking Kangjian community as an example, within 5 zones of the community was set up 5 zonal psychological health popularization stations, and 35 residents' committees had each set up resident psychological health work stations each with building psychological health work area down the hierarchy. 198 volunteers including the resident's committee cadres were involved in this 6-level psychological health working platform.

Do the residents understand psychology? Along with the development of the spiritual civilization of the society, there is an increasing number of residents who are aware of what psychology is about. Unfortunately, there are extremely few residents who truly understand the common knowledge and basic theories of psychology. Most feel that psychology is mysterious in nature, and as such steer clear of this topic. Therefore even fewer people have taken the initiative to apply psychology to resolve issues in their daily lives. To assist residents in psychological problems, the Xuhui district began to invite psychologists and professional consultants to popularize psychology knowledge on a voluntary basis.

The Workroom is operated in the following different manners:

1) Community psychology counseling and training. The starting of the community psychology counseling class will use the neighborhood as an entity and the community as a foundation. Experienced psychology consultants, psychologists and sociologists supervise both the counseling and training sessions.

2) Regular activities

Under the guidance and support of Xuhui district Science and Technology Association, the workroom has launch some regular promotional activities such as “Sunshine Family” popular science series of activities, focusing on topics like women’s problems, old-aged problems, spouse relationship etc. Meanwhile, public seminar is to popularize the basic knowledge pertaining to psychology, as well as to alleviate the concerns on seeking psychologist’s help.

3) Research Work

While the workroom implements the popularization of psychology knowledge, it will also conduct researches on various topics including “Psychological self-help and assistance system for community residents”.

Moreover, the workroom will combine the expert resources and to leverage on the strength of teamwork in order to edit related books, hanging pictures, handbooks, discs and promotional paper etc. This will thus lead to the formation of self-check, analysis and an operation system.

## **EVALUATION**

### **The Result of the Propagation of Science and Technology**

Since the setting up of the Dr. Liu (Suzhen) Psychology Sunshine Workroom, there has been established a Community Psychological Health 6-level Network in Kangjian; furthermore through the psychological health hotline, the workroom initiated the “Sunshine Family” popular science series of activities so as to develop the popularization of psychological health, to a great degree of success. In 2005, based on the model of the Kangjian Community and as a project of the Xuhui District Community and Society Development, the workroom will take steps to promote in 5 other Communities consisting of Changqiao, Lingyun, Longhua, Hongmei and Caohejing.

The main effects within the Xuhui district community resulting from the works of the workroom are: 1) Set up a team of psychological health volunteers who are active in all levels within the community, and they have had a command of the basic knowledge pertaining to psychological health and counseling skills etc. 2) Through the popularization and promotion of knowledge on psychology, it helps the residents to correctly identify psychological health problems and to improve their psychological health. 3) Through providing psychological consultation services, it helps residents who suffer from psychological disturbance or ill health. 4) A psychological self-help and self-aid plan for the residents in the Kangjian Community in terms of early warning the risks of residents and their families has been worked out to ensure harmony among families and individual residents. 5) Form an extensive, effective and self- and social safe support system.

Since 2002, Dr. Liu has led the psychological popular science volunteers to begin knowledge promotion activities in Tianlin and Kangjian Community. Along with the promotion and

popularization activities, reasonable proportion of the community now have been aware of the concepts of psychological health and residents have proactively arrived at the workroom to seek expert help, resulting in some success cases.

According to the non-exhaustive survey in October 2004 on the status of special 7 groups within Kangjian community, psychological checks were being done through psychological tests, as well as being coached. Psychological testing tools like Eysenck Personality Questionnaires (EPQ), SCL-90 Symptom Checklist, Social Support Survey (SSS), Family Environment Survey (FES) etc are used to assess their psychological health [4]. After psychological training, some people have achieved reasonable improvement in mental health. They understood general knowledge on psychology, how the mind affects actions and simple psychological adjustment skills, for example by declaring how one feels, or changing of focus, or control of compulsion etc. They learned about maintaining psychological balance through controlling their emotions.

Random sample surveys on 30 individuals aging between 22 to 60 years old were conducted by some people including Dr. Liu Suzhen after 2 years of psychological counseling within the Tianlin area. There were 12 men, and 18 women. Through the Symptom Checklist (SCL-90), one would assess the changes in psychological status before and after the counseling[5].

**Table 2.** 30SCL-90 Comparison for 30 Residents Before and After Counseling

Symptoms	Before counseling (M±SD)	After counseling (M±SD)	T Value
Total Scores	148.73±17.97	100.73±9.66	4.679*
Total Average	1.65±0.21	1.12±0.11	5.339*
Somatization	1.90±0.43	1.20±0.23	6.098**
Obsessive-Compulsive	1.95±0.33	1.24±0.24	3.917*
Interpersonal Sensitivity	1.65±0.36	1.09±0.15	12.273***
Depression	1.67±0.33	1.10±0.13	19.507***
Anxiety	1.58±0.35	1.07±0.16	29.354***
Hostility	1.51±0.39	1.12±0.15	14.052***
Phobic Anxiety	1.45±0.57	1.07±0.16	9.856**
Paranoid Ideation	1.46±0.39	1.04±0.08	14.615***
Psychoticism	1.49±0.28	1.05±0.09	10.246**

It can be seen from Table 2 that there was remarkable difference in the psychological health of the residence before and after counseling. The improvement was especially apparent in the areas of human relationship, anxiety, depression, hostility and obstinacy.

In all, the commencement within the community of popular science work by the Xuhui District popular science volunteers, consisting of helping the society to care for the disadvantaged and helping the disadvantaged to be self-sufficient, had allowed residents within the Community to enjoy totally-new services.

## **Evaluation of the Result of Dissemination of Science**

The sunshine workroom's main function was to let residents understand that psychology was a science deeply connected with life and growing up. Psychological theories could be applied to everyday life and could help people to effectively deal with problems and anxieties, along with stabilizing and adjusting their moods and attitudes. The following methods were used to evaluate the popularization of psychological knowledge and results: 1) Questionnaires: these were given before and after the popularization effort and evaluated, in respect of the grasp of knowledge in psychology according to the changes in the answers. 2) Coverage: Based on the number of members in each family who had come into contact with the popularization drive (promotional flyers, exhibition boards, "wall-papers", seminars and large scale activities), evaluation was made by way of their proportion. 3) Frequency of problems: Instances of problems within specific periods of time and attributed to psychological issues (e.g, onset of mental illness, psychological hindrances, suicides, family disputes, fracas within community, etc.) were tabulated and evaluated based on the changes in their frequency.

Needless to say, the process of development of Sunshine Psychology workrooms had also met with some problems. For example, the development of science volunteers and the attraction of community residents to actively participate in the dissemination of psychological health knowledge had in the beginning not received much attention and active participation from the residents, in part because it was not a government's mandatory program. Furthermore the process of popularization of psychology involved funding. There may be certain hindrance in its sustained development, since the funding came from the government alone, and the workroom's experts only participated as volunteers.

As a role model for the Popular Science Experts Series, the Dr. Liu (Suzhen) Psychology Sunshine Workroom had, driven by the ideal of psychology experts developing at the grass-root level psychological health popularization promotion, had enhanced the popularization of psychological health and had served the Community's residents. This had in turn initiated the interactive process of the residents participating in psychology popularization, as well as creating a scientific and cultural ambience comprising of a spirit of popular science, scientific thinking and methodology. Thus science has finally returned to serving human needs and has returned to the need to serve society's development. With a view to the expansion of the Popular Science Experts Series Workroom, Xuhui District will eventually promote more workrooms.

## **DISCUSSION**

Psychology straddles both arts and science. It has elements of natural sciences, as well as elements of human science. It employs a large number of scientific jargons, so it often requires its objects to have certain knowledge and level of understanding. However, according to research, its targets usually accept their information according to their subjective whims, such as needs, moods and educational background, etc. They often "cherry-pick" in their understanding, without completely following the intentions of those trying to educate them. In the dissemination of science and technology, those undertaking the tasks of dissemination are usually with good educational background, have vast reserves of knowledge and underwent strict professional training. Not so in the case of most recipients [6]. The community's

residents as targets of popular science drive are different to youths; their background, methods of thinking, and level of understanding are relatively fixed. Thus they accept things in a selective manner. In this respect, psychology experts among the workers spurred the recipients' psychology in a variety of ways, consisting of promotional materials, community papers, training, seminars and organization of psychological health groups. In this way the theory of psychology was closely linked to the issue of health, an issue that is part of the residents' everyday lives. They also created, as far as they could manage, conditions for the residents to come in touch with the knowledge of psychology, by way of the so-called "Five in place": "activities in place, consulting in place, networked assistance in place, emotional support in place and physical and mental health in place." In order to readily understand and grasp the residents' psychological information, the workroom put in place, jointly with the community, a psychological health warning system.

Furthermore, in this case through the government departments and community's involvement in the naming of "Famous Popular Science Experts Series Workroom" and the establishment of work proposal, bilateral and interactive spread of science was accelerated, popular science was promoted as a social initiative, and a cultural atmosphere was created in which there was popularization of science within the community. By way of the popular science volunteers chosen among well-known science experts with outstanding performances and relatively high influence in both the professional and social fields to have workrooms named after them, there was a uniform image, a working group with clear working objectives, scientific research taking precedence over practice, resulting in enlarged creative effects. Popular science volunteers under the leadership of professional experts were actively involved in the spread of science and technology. This had in turn established for the popular science volunteers excellent conditions and environment, providing convenience to the community's residents in enjoying expert's professional service, thereby allowing more people to be involved in the spread of science and technology. The psychology sunshine workroom in this case also fully utilized their professional knowledge and developed popular science work through the public's concern with psychological health, thereby raising the popularization's effect. Both the experts and the volunteers in this project were equipped with a certain degree of professionalism, greatly fostering the spread of science.

## **CONCLUSION**

The popularization of science does not mean merely spreading knowledge and technology, but must be consciously and systematically spread the scientific spirit, scientific thinking and scientific methods, so as to create a scientific and cultural atmosphere.

The spread of science must be bilateral and interactive, taking full advantage of the scientific techniques and practical application, so as to allow the public to be involved in the popularization of science and to encourage them to, in a proactive manner, propagate science.

Through the government's involvement and through a variety of incentive schemes, even more technical people are attracted in the spread of science. Well-known personalities, expertise knowledge and teamwork, in conjunction with strengthened professional training for volunteers, are ways in which the popularization of science is promoted as a social initiative.

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