Macrothink Institute™

Journal of Educational Issues
ISSN 2377-2263
2022, Vol. 8, No. 2

Innovative Knowledge Management Tool of the Visually Impaired Students' Mental Health Care for Teachers, Parents and Public Health Personnel

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Received: July 30, 2022 Accepted: August 31, 2022 Published: September 15, 2022

doi:10.5296/jei.v8i2.20123 URL: https://doi.org/10.5296/jei.v8i2.20123

Abstract

Research on innovative knowledge management tool of the visually impaired students' mental health care for teachers, parents and public health personnel is an academic investigation for research and development purpose. Knowledge management was employed in the early stage of the investigation. The objectives of this study were comprised of 1) developing an innovation to be used by teachers, parents, and public health personnel to provide support to the visually impaired children; 2) sharing knowledge regarding mental health support of the visually impaired students to vision teachers, parents, and relevant public health personnel; and 3) outlining a number of approaches for mental health support to visually impaired children. This study began with an interview with relevant individuals to identify various issues of innovative development with knowledge management. A knowledge management team was formed with participating blind schools which aimed to measure the knowledge level of each school, to design and develop an innovation, to provide access to the knowledge and to identify methods for knowledge sharing. The innovation was adopted in five schools, where the presentation of the investigation results, and knowledge sharing forums were required. There were three main findings: 1) the innovative knowledge management tool was perceived as a handbook with both regular font and braille codes for teachers, parents, and public health personnel to assist visually impaired children with their

mental health. The E1/E2 efficiency score of the handbook was 83.55/82.36 which was higher than the stated requirements; 2) Teachers, parents, and public health personnel received a statistically significant higher mean score of cognitive disabilities in mental health support of visually impaired children after the use of the handbook at the.05 level; and 3) a policy recommendation at school, Education Area Office, and Department of Mental Health served as a guideline of mental health support for children with visual impairment.

Keywords: Mental health care for visually impaired students, Knowledge management, Innovation

1. Introduction

1.1 Introduce the Problem

According to the report, there are around 19 million children under the age of 15 have a visual impairment; 7 million of the 19 million children with visual impairment experience a severe visual loss, and 12 million of these children have a few vision problems (WHO, 2017). In Thailand, found that 0.11% of the children were blind and 0.21% of the children had blurred vision (Lohchindarat, 2018). Some children had emotional and behavioral issues which associated with their mental health, for instance, sadness, loneliness, sense of being isolated, stress, oppression, emotional instability, and neediness. In some cases, they might develop habits of stealing, threatening, destroying objects, and hurting other people. Child counselors have informed of many problems that piled up inside the children, especially the adolescents and teenagers, for examples, stress, melancholy, despair, low self-esteem and solitude, including the increase in drug usage (Bannakiet et al., 2014). Moreover, there was a tendency to skip classes, not paying attention in classes, and mimicking behavior in a more gender deviant way (Bannakiet & Boonmahome, 2018). These issues prompt the majority of their teachers, parents, and guardians to be concerned as they are afraid that violence will further complicate the children's mental health.

As a consequence, all involved parties are aware of the importance of mental health care for visually impaired children which was not less vital than children with normal vision. Researching, organizing workshops and creating guidebooks on mental health care for visually impaired children had been carried out to a huge number of vision teachers around the country. The result shows that children with vision impairment obtained higher quality of mental health care. On the other hand, vision teachers who work with children could have more experience, knowledge and awareness concerning the mental health of visually impaired children so that they could be more accepting to the children without bias nor narrow-minded attitude towards the problems. Notably, many teachers have gained knowledge and skills in assisting children with mental health concerns, for examples, monitoring their facial expressions and actions of squinting eyes, conversing with the children while maintaining a safe distance and knowing the right moment to help them until they become a competent individual.

According to a survey of teachers at blind schools, knowledge concerning mental health issues of the visually impaired children and their support was already present in schools.

Furthermore, all teachers have already been aware of the children's mental health, particularly when it comes to counseling children with behavioral and emotional issues. However, the schools are lacking in knowledge management, the storage of knowledge, and means to utilize knowledge, including the teachers' competence to sort and share their knowledge to each other. The teachers have utilized their academic expertise in a personal level. Moreover, there was a suggestion to revise the research's old version of the "A guide to mental health counseling for students with visual disabilities" 2014 edition to be up-to-date and to provide training in counseling skills which focus on the mental health of visually impaired students to all teachers at the school for the blind, including the students's parents and involved public health personnel. This should be done in order to provide holistic assistance to the children (Chanyanuch Jakaew, interviewee, January 5, 2018; Daranee Daunkakan, interviewee, January 8, 2018). Moreover, it will benefit the students, schools and families, and it will reduce the burden on mental health support agencies in taking care of the children.

This study aims to provide an innovation to improve the mental health of the visually impaired children to teachers, parents, and public health personnel as well as to educate vision teachers, parents, and other public health personnel about mental health support for children with visual impairment and to create guidelines that visually impaired children may benefit from mental health services.

The findings of this study can lead to public policy suggestions for providing educational programs that improve mental health of the students on the scales of the school, the Department of Mental Health and the Education Area Office which can improve the quality of life and social inequalities of children with disabilities.

2. Method

This research uses the Research and Development (R&D) model and integrates Knowledge Management methods (KM) in the early stage of the process. There are three steps of researching process: Innovation development stage, Implementation of innovation and The Process of monitoring, and evaluating the implementation of innovations. The steps are described as follows:

2.1 Step 1: Innovation Development

2.1.1 Inspecting and Analyzing Data (R1)

Environmental inspection and analysis, problem synthesis, and mental health needs assessment of visually impaired children was completed through the following procedures:

2.1.1.1 Schools for the blind around Thailand were invited to participate in the research project. There are 10 schools participated: 1) Bangkok School for the Blind; 2) Santi Chintana School for the Blind in Phrae province; 3) School for the Study for the Blind in Nakhon Ratchasima; 4) School for the Study for the Blind in Khon Kaen province; 5) School for the Study for the Blind in Roi Et province; 6) School for the Study of the Blind and the Blind with Multiple Disabilities in Lopburi province; 7) Redemptorist Pattaya School for the

Blind; 8) Thammakwittaya School Phetchaburi province; 9) Hat Yai International School of Education for the Blind, and 10) School for the Blind in Southern Surat Thani province.

2.1.1.2 Knowledge management team in each participating school were formed to find a solution to mental health problems of the visually impaired children and their needs as well as to extract individual knowledge and expertise in helping the children, including the process of issues identification of the innovation.

2.1.1.3 Data were collected via focus group discussion with a group of 14 school directors and a group of teachers who were members of the knowledge management team. Two groups of 8 people each were set up with a total number of 30 people during March 11-12, 2019.

The management team was positioned as a director or deputy director from 10 schools with 14 people in total. Consequently, the school sent a list of names to be selected according to the following qualifications:

(a) Hold a position as a director or deputy director of the school.

(b) Student support system is provided at school as specified by the Primary Education Office.

(c) Willing to participate in the research and small group seminars.

The teacher group who are members of the knowledge management team are consisted of 16 people from 10 schools which took part in nominating a name list. The list was selected according to the following qualifications:

(a) Be responsible for/co-operate with the school's student support system.

(b) Had used the "Guide to Mental Health Counseling for Students with Disabilities 2014 edition" in the past.

(c) Willing to participate in the research and small group seminars.

2.1.1.4 The tools that were used in this process were the questions asked during group discussions.

The questions for the management group are the following:

(a) What should be the policy for mental health support of the visually impaired students?

(b) What should the teacher use as a guideline to work in the improvement of the students' mental health in the terms of media/information/innovation?

(c) What should be the approach to integrate the innovation from the research?

(d) What measures should be taken to stimulate knowledge from the innovation?

(e) For the effect of the policy to cover the overview of the research and the school's policies and to achieve sustainable development, what should be the action plans/projects/activities in accordance with the measures in Article 4?

The questions for the teacher group are:

(a) What are the problems related to the characteristics, behaviors and mental health conditions of the students?

(b) Are there any particular comments on the issue of "Guide to Mental Health Counseling for Students with Disabilities 2014 edition"? and what needs to be improved?

(c) What should be included in the individual knowledge of the teachers and what needs to be integrated into the new edition of the handbook?

(d) What characteristics/types/forms of the innovation from this research do you want? And how do you want the knowledge to be conveyed?

2.1.1.5 Data analysis with the information obtained through the group discussion and content analysis were summarized as the following:

(a) Personality and behavioral issues are connected to mental health of the visually impaired children, which had an impact on their dangerous behaviors towards others, for examples, bullying, stealing just for attention, lack of self-awareness, imitating other people's behaviors, undesirable actions, sexual misconduct, inattention to learning, lack of focus, lack of ability to analyze certain circumstances that will affect themselves, addiction to mobile phones, games and radio, desire to harm others, lack of respect for adults, violation of the social norms, miscommunication with the teachers, jumping to conclusions, lack of future aspirations, obscuring the significance of education, and isolating themselves from the society.

(b) Supporting children's mental health must be a collaborative and comprehensive effort which includes the teachers, parents, and necessary health experts into the project.

(c) The most appropriate approach to support the mental health of the visually impaired students by teachers, parents, and relevant health care workers on a basic level is to provide psychological-focused counseling sessions conducted by teachers. Moreover, the approach should be integrated into the school's student support system.

2.1.2 Developing and Monitoring the Quality of the Innovation (D1)

This stage brings the results from the group discussion of the school directors and teachers who were members of the knowledge management team, along with the process of data inspection and analysis from document reviews and related research with and intention to develop the innovation into a book and a tool used to collect the data. The quality of the results was checked as according to the following steps:

2.1.2.1 The innovation was developed into a book, "Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel" which was in a drafted version. The content was divided into 5 units which are consisted of the following:

Unit 1. Context of the Visually Impaired Children.

Unit 2. Concepts and Theories of Normal and Abnormal Development in Children and Adolescences.

Unit 3. Mental Health Problems for Children with Visual Disabilities.

Unit 4. Guidelines for Mental Health Support for the Visually Impaired Children.

Unit 5. Examples of the Application of Consulting Process and Skills.

2.1.2.2 Checking the Quality of the Innovation or the Book

(1) The content of the innovation or the book was devised by the experts to consider conformity of the content. Three people found that 3 experts agreed that the handbook was consistent with the content and with the Item-Objective Congruence Index (IOC) at 0.90.

(2) The innovation or the book as developed according to the Promwong's concept in 2013 by assessing the process (E1) and evaluating the results (E2) was measured with its efficiency. Furthermore, Research and Development (R&D) was implemented. E1 refers to process efficiency as a percentage mean score which is obtained from a test during activity in every class, and E2 refers to the efficiency of the result which is an average score of a percentage obtained from the test after activity in every class.

There are 3 steps to measure the efficiency of the developed handbook as the following:

Step 1. Single Performance Test Efficacy was conducted by having one teacher with normal vision and one teacher with visual impairment from the Pattaya Redeemer School for the Blind. The two teachers read the book "Manual for Mental Health Support for Visually Impaired Students Provided for Teachers, Parents and Public Health Personnel". Consequently, they were tested during the lesson with questions at the end of the chapter. Afterwards, they were tested after the lesson with a test achieving a single performance score of 72.00/63.00. Their outcome was adjusted accordingly, and they were taken to the next stage of testing.

Step 2. Group Performance Efficiency Test was conducted by having 2 normal sighted teachers, 1 parent, and 3 visually impaired teachers from Pattaya Redeemer School for the Blind (they were not the same people) revised the book and did the test during the lessons with questions at the end of the chapter and another test after class. The group efficiency score was 81.50/75.93. The test was revised for the next step.

Step 3. Field Performance Test was executed to determine the efficiency.

Provided 8 teachers with normal vision, 2 parents and 10 teachers with visual impairment from Roi Et School for the Blind and Khon Kaen School for the Study of the Blind revised the book and were tested during the lessons with questions at the end of the chapter. Afterwards, the field efficiency score was 83.55/82.36. Being compared to the criteria, E1/E2 80/80, it was found that innovation or the book had a score higher than the specified threshold.

2.1.2.3 Creating Research Tools to Collect Data and Check the Quality

(1) Cognitive test on mental health support of children with disabilities aligned with the counseling process. It is a multiple-choice test. 4 out of 45 options had an Index of Conformity (IOC) of 0.83 and the confidence was determined using the Kuder-Richardson method which had a confidence value of 0.72.

(2) Self-assessment form on mental health support skills for students with disabilities aligned with the counseling process. It is a characteristic of the estimation scale. Four levels with 37 questions had an IOC of 0.78 and confidence was determined using Cronbach's method. It has a confidence value of 0.83.

(3) Satisfaction assessment form for innovation or the book "Manual for Mental Health Support for Visually Impaired Students Provided for Teachers, Parents and Public Health Personnel" was divided into 4 editions, namely, the assessment edition, the administrator's edition, the teacher's edition, and the parent's edition. The assessment of public health personnel was divided into 2 parts: general status, and satisfaction with the handbook. The assessment had 5 levels of estimation scale with 10 questions. Moreover, it had an Index of Conformity (IOC) of 0.83, and the confidence value is determined using the Cronbach Alpha which resulted in a confidence value of 0.62.

2.1.2.4 Overseeing the sharing sessions of how to use the innovation or the book with 25 teachers, multistage randomization was obtained and divided by 5 regions: Northern region which is Santi Chintana School for the Blind in Phrae province, Central region is Thammik Wittaya School in Phetchaburi province, Northeast region which is School for the Blind in Nakhon Ratchasima province, and South region which is Hat Yai International School of Education for the Blind. Lastly, the school for Bangkok area is Bangkok School for the Blind. Using a period of 30 hours on 24 - 27 May 2019 while adjusting the method of teaching how to use the innovation or the book, the innovation was developed according to the recommendations.

2.2 Step 2: Implementing Innovation (R2)

2.2.1 Sharing the use of the innovation or the developed book with training to all schoolteachers, representatives, parents and involved health personnel of each school who are willing to bring the innovation or the book to be used in 5 schools as mentioned above, 96 teachers were divided into 4 training sessions: class 1 on 11-13 June 2019 with 25 participants, class 2 on 18-20 June 2019 with 21 participants, class 3 on 2-4 July 2019 with 23 participants, and class 4 on 9-11 July 2019 with 27 participants.

2.2.2 Bringing an innovation or the book "Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel" which has been developed and improved, the book was used to support the mental health of the visually impaired children in 5 schools that are willing to use the innovation. During the period from 12 July 2019 to 30 October 2019, there are a total of 143 innovative users, where 16 of whom were school directors, 77 teachers, 25 parents and 25 public health personnel had used the book as a guide in supporting the student care system according to the policy of the Office of

the Basic Education Commission which the school has done already, as shown in Figure 1.

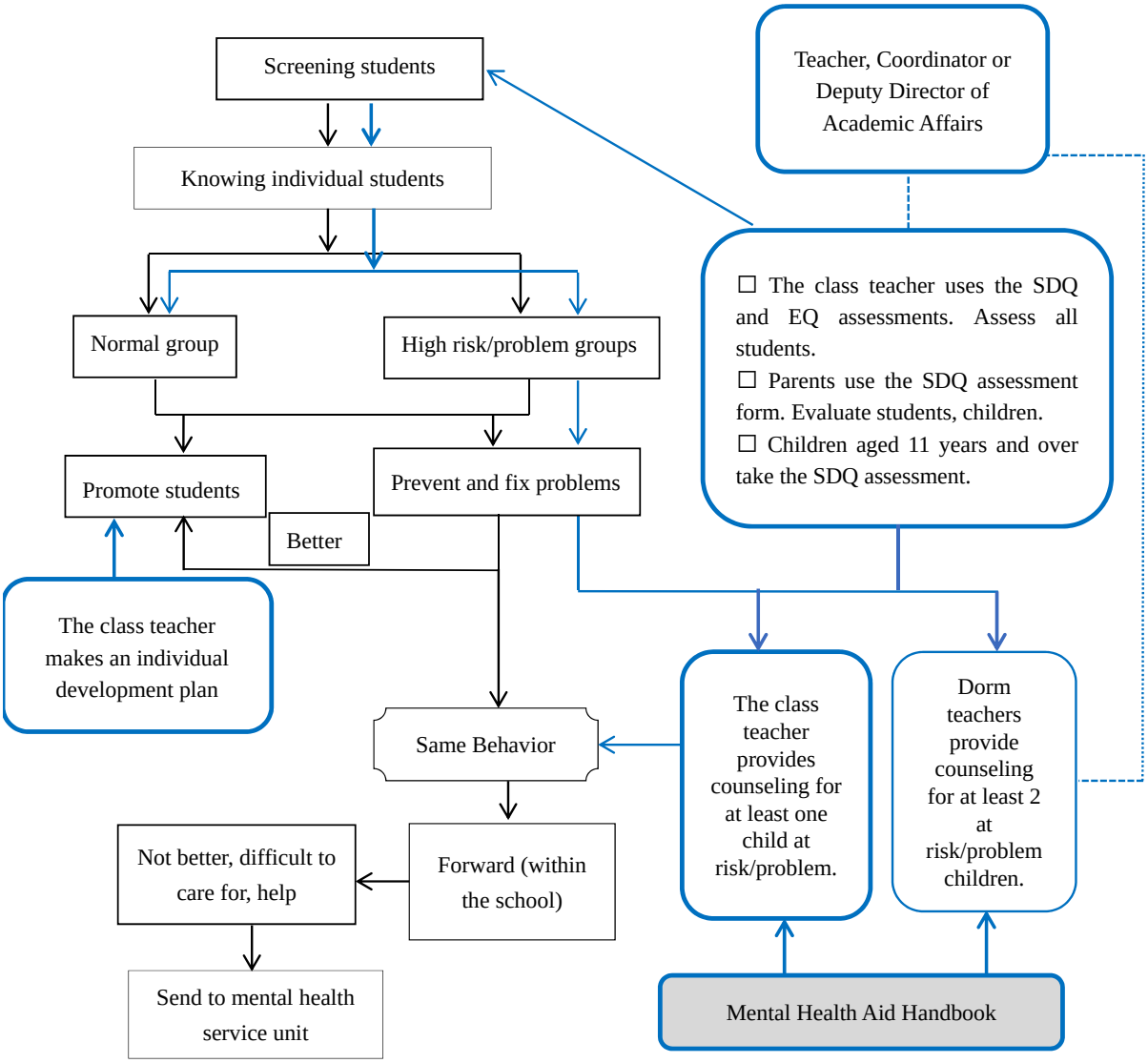

Figure 1. Chart showing the implementation of innovations/books "Mental Health Support of the Visually Impaired Children Provided by Teachers, Parents and Public Health Personnel in Student Care System"

2.3 Step 3: Following up and Evaluating the Implementation of the Innovation

2.3.1 Monitoring and evaluating the implementation of the innovation or the book "Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel" to 5 blind schools twice after 1 month and 3 months had to follow

the objectives as following:

(a) Following up on the project implementation in the stage of utilizing the knowledge and the innovation.

(b) Exchanging knowledge, skills and experiences from the application of the knowledge and the innovation for the benefit of each school.

(c) Consolidating the success of problems and obstacles in the project after having used the innovation for 1 month and for 3 months.

(d) Jointly criticizing and with providing policy recommendations for the implementation of the project which led to the success on a scale of the school level and the ministry level.

2.3.2 The 1st meeting was to follow up on the results of the developed innovation after a month of implementation on August 31, 2019. There were 20 participants in the meeting who were administrators and teachers from 5 participating schools. In the second time, after three months of implementation, on November 29, 2019, there were 82 people in the meeting who were administrators and teachers from 5 schools, invited guests and general public.

2.4 Data Collection and Analysis

2.4.1 Having teachers, parents and involved health personnel in all 5 schools participated in the research, the innovation or the book must be used to conduct the following: 1) a cognitive test on helping mental health problems of the children with disabilities as aligned with the counseling process, and 2) a self-assessment form for mental health support skills for the children with disabilities as aligned with a 3-month counseling process both before and after the use of the innovation or the book.

2.4.2 Having teachers, parents, and relevant public health personnel using the innovation or the book, the administrators of all 5 schools had completed the satisfaction assessment form of the book, “Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel”

2.4.3 The data analysis applied statistics frequency distribution, percentage, mean, standard deviation, and Paired samples t – test and independent samples t –test.

3. Results

The results of the research served the following purposes of the study:

3.1 Innovation Development

The result is the book, “Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel” which was prepared in normal font and braille codes. The book has a score of efficiency equal to 83.55/82.36 which is higher than the specified criteria E 1/E 2 80/80.

Normal Edition of the book, “Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel”.

Braille code’s edition of the book, “Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel”.

Figure 2. “Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel” in normal font and Braille code’s editions

3.2 Knowledge Transfer of the Mental Health Support for the Visually Impaired Children to Vision Teachers, Parents, and Relevant Public Health Personnel

The results of the research are demonstrated as the following:

3.2.1 The results of the assessment of knowledge and understanding of mental health support for the visually impaired students/children which was measured with the teachers, parents and public health personnel discover that cognitive scores measured after the use of the innovation was higher than before the use of the innovation which is statistically significant at the .05 level as shown on Table 1.

Table 1. Comparison of cognitive scores for mental health support for students with disabilities which was measured with the teachers, parents and public health personnel before and after using the innovation or the book

Cognitive Score		$\bar{x}$	S	$\bar{d}$	$S_{\bar{d}}$	t
Teachers	Before	32.32	2.84	2.41	.27	8.90*
	After	34.74	2.15			
Parents	Before	19.20	4.35	11.84	.23	9.56*
	After	32.88	3.51			
Public Health Personnel	Before	31.60	2.32	2.48	.25	9.57*
	After	34.08	1.95			
Overall	Before	32.07	2.91	2.28	.16	13.53*
	After	34.36	2.37			

Note. * $p < .05$.

3.2.2 The results of the assessment of mental health support skills of the students/children with disabilities were aligned with the counseling process of the teachers and parents. Health workers already had the skills to help with the children's mental health problems whereas no schools have sent children for treatment. The workers have read the innovation or the book, however, they were not assessed in this section as shown in Table 2.

Table 2. Comparison of skills which help mental health problems of students with disabilities. The process of the teachers' counseling session before and after using the manual (n = 77)

Skill points		$\bar{x}$	S	$\bar{d}$	$S_{\bar{d}}$	t
Teachers	Before	114.44	6.81	9.13	.50	18.24*
	After	123.57	7.27			
Parents	Before	53.52	4.00	56.08	1.47	38.01*
	After	109.60	7.22			
Overall	Before	98.98	7.68	8.33	. 39	21.23*
	After	116.58	8.48			

Note. * p < .05.

3.2.3 The results of the satisfaction assessment of the teachers, parents, public health personnel and administrators to "Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel" found that all of them were satisfied at the highest level with the overall results as shown on Table 3.

Table 3. Satisfaction level towards "Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel"

Item	Satisfaction Level		
	$\bar{x}$	SD	Interpretation
1. Teacher satisfaction with innovation (n = 77)	4.72	.55	Highest
2. Parental satisfaction with innovation (n = 25)	4.61	.51	Highest
3. Public health personnel satisfaction with innovation (n = 25)	4.70	.57	Highest
4. School directors satisfaction with innovation (n = 16)	4.70	.44	Highest
Overall Satisfaction	4.68	.51	Highest

4. Discussion

4.1 Formulating Guidelines for Mental Health Support for the Visually Impaired Children from the Objective No. 3

4.1.1. Policy Recommendations

4.1.1.1 Policy Recommendations at School Level

(1) Policy Director

At the school level, the policy director must be a school administrator or school director.

(a) Establishing a policy on the use of the handbook to support the operation of childcare systems, such as:

(i) All children in schools must be screened for behaviors. They must be categorized into groups for further development and support which will be suitable for them. Children placed at-risk and troubled group may need early mental health support promptly, while children with complex or severe mental health problems may need to be referred to a specialist as soon as possible.

(ii) There is an order to assign a person responsible for the main roles. Moreover, roles and duties need to be defined to operate children support system by using the innovation or the book as a guideline to develop knowledge and skills in helping children's mental health through counseling sessions.

(iii) Establishing a working group in childcare is the job of the guidance, school health and administrative departments. Moreover, the main teams need to be organized as, for instances, operation team, lead team, working team, and coordination team for planning, selecting and screening in order to develop individualized child development plans continuously.

(iv) Class teachers, advisors, all teachers and involved public health personnel in childcare need to be ordered while taking the main approach from the innovation or the book and following up the results every semester. Furthermore, the results need to be summarized annually at the end of each year and reported to the management team.

(b) Policy implementation is consisted of the following:

(i) Organizing teacher meetings to inform of the policy concerning the operation of the teachers and dormitory teachers and to build an attitude in the implementation of childcare systems along with the use of the innovation or the book to support the operation and to help children with mental health problems so that they can take care of themselves and live happily with others.

(ii) Encouraging all involved parties to use the innovation or the book to support the mental health of the visually impaired children by holding meetings to recommend the approach to use the handbook and following up on the use of the handbook every month.

(iii) Supporting the homeroom teachers, advisors, other teachers and involved public health personnel in childcare with main guidelines from the innovation or the book and following up every semester while summarizing the results at the end of every year to report to the management.

(iv) At the school monthly meetings, there should be an agenda for behavior problems, risky behaviors and children's mental health problems, including proper support for the children.

(2) Policy Executors and Overseers

The Deputy Director of Academic Affairs or the Head of Academic Line Services should be assigned to motivate and monitor the policy implementation as the team leaders. They have to work on defining the roles and duties of the lead team, working team, and coordination team, for examples:

Lead Team: Should be guidance teachers or other assigned roles to manage an effective mental health care system in schools.

Action Team: Should be class teachers who play a role in screening and identifying groups of children in order to make individual child development plans. They have to prevent, correct, forward and report the results to the Academic Director or the Head of Academic.

Coordination Team: should be class teachers, dormitory teachers, and joint schoolteachers, who play a role in childcare and in providing basic counseling sessions to children.

4.1.1.2 Policy Recommendations at the School District Office Level

(1) Policy Director

At the school district office level, there should be a director of the Office of Educational Service Areas to supervise the implementation of the policy and to develop student support system according to the Office of the Faculty of Basic Education in the Ministry of Education. Therefore, for blind and joint schools, the authority who initiates the policy should follow the handbook from this research as a guide to support the implementation of child support systems. Furthermore, there should be a policy for teachers to use "Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel" as a supplementary tool in the implementation of childcare system. Parents of the visually impaired children should understand the nature of children behavioral traits, mental health issues and appropriate action for help.

(2) Policy Executors and Overseers

According to the administrative structure, roles and duties of the student support system is constructed. The Office of Educational Service Areas has a Director of Education Promotion Group who motivates and monitors the implementation of the policy. Therefore, "Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel" need to be encouraged to be used as an additional tool in the student support system of the visually impaired children. Moreover, the role of Director of Education

Promotion Group should be defined.

4.1.1.3 Policy Recommendations to the Department of Mental Health Ministry of Health

(1) Policy Director

According to the previous role, the Director-General of the Department of Mental Health must be a policy director who leads the “Strategic Office of Mental health”, which has already been working in the policymaking in order to include the mental health issues of the children with disabilities into the policy.

The officials should agree on the following strategic issues:

(a) Promoting mental health and preventing mental health problems at any age groups for the development of the students’ mental health at school. Specific target audience should be destinated who the visually impaired children are.

(b) In the integrated work plan, working with relevant agencies both within and outside the Ministry of Public Health allows more agencies to be responsible for the visually impaired children.

(c) On the issue of surveillance and care for children with behavioral and emotional problems, there should be more attention to the children with visual disabilities, especially in coordination with the student support system at all levels. Office of the Faculty of Basic Education and schools for the blind, including all joint schools that support child screening, should beware of the children’s EQ development which are lacking in learning difficulties, problem-solving skills and different risk behaviors as explained in “Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel” which is treated as an additional tool to help children with mental health issues.

(d) Promoting accessibility to mental health and psychiatric services to the visually impaired children. Guidelines for mental health service system of the visually impaired children should be established including an emergency psychiatric patient delivery system in order to provide accessibility of the services to the children. More reasonable services and the increase in coverages of the services in all health zones should be recognizable by starting a prototype service system at a mental health center first and foremost.

(e) Mental health and psychiatric services for the visually impaired children should give an importance to consulting services that are unique to the visually impaired children.

(2) Policy Executors and Monitors

Overseeing, monitoring and evaluating the overall performance should be jointly responsible for the “Bureau of Mental Health Service System” and “Bureau of Mental Health Promotion and Development”, for examples:

(a) Adding the information regarding mental health issues and mental health support for

the visually impaired children to online electronic knowledge repository via the Department of Mental Health Academic Resource Center website.

(b) Cooperating with the Ministry of Education in the establishment of a strong and ongoing support system for the visually impaired children which allows all teachers to support the children at an early stage.

5. Recommendations

5.1 Suggestions for the Utilization of the Manual

5.1.1 All five schools that utilizes the innovation or the book, "Manual for Mental Health Support for Visually Impaired Children Provided for Teachers, Parents and Public Health Personnel", can be model schools in term of supportive childcare system with an emphasis on team building. Moreover, the results should be expanded to joint schools by asking for cooperation from the Department of Mental Health and the Office of Special Education Administration Office of the Basic Education Commission.

5.1.2 The research work, which is the manual, and various assessments should be published to Office of Special Education for further development in practice and to address to relevant departments.

5.2 Suggestions for Further Research

5.2.1 Continuing the research by creating e-books and registering them in every blind school library in order to disseminate research can result in more people being aware of visual impairments, especially the teachers, parents and those interested in the handbook. The book's content can be accessed in many alternative ways.

5.2.2 The research in the knowledge management style of each school which focus on the system algorithm and in-depth specialized techniques should be continued. This research also serves as a case study for interested persons to conduct further investigation.

Research Ethics

The researchers submitted the research project to the St. Louis College of Human Research Ethics Committee. Consequently, it was approved with full consideration which received a certification number E.013/2562 on March 5, 2019. Permission to develop and improve the copy of the copyrighted letter of the Office of Health Promotion Fund (Thai Health) was received as a license on March 4, 2019. Permission to use the innovation and to collect data for the research with the teachers and students under the Office of the Private Education Commission was received as an acceptance letter for permission to collect data on February 22, 2019.

Acknowledgements

The innovative knowledge management program on mental health support for the visually impaired children provided for teachers, parents and public health personnel had received research funding from the National Research Council of Thailand (NRCT).

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