Rural Pupils' Scientific Literacy of Meteorological Disaster Prevention — Based on a Questionnaire Survey in Rural Schools in Bashang, Zhangjiakou, Hebei Province

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Abstract

This paper gives system analysis to the current situation of the scientific literacy on meteorological disaster defense of the rural pupils in Hebei province by conducting questionnaire surveys on the scientific literacy on meteorological disaster defense of the 114 rural pupils in Bashang area, Zhangjiakou, Hebei province, giving quantitative statistical analysis on the original data obtained from surveys and combining with rural characteristics and cultural foundation of the pupils from such aspects as meteorological disaster defense consciousness, meteorological disaster defense knowledge reserve, meteorological disaster defense knowledge demand and acquisition channel credibility. Moreover, it puts forward the relevant suggestions on promotion of the scientific literacy on meteorological disaster defense of the rural pupils from the five angles of learning interest promotion, popularization channel enrichment, audience refinement, responsibility consciousness cultivation and practical training strength reinforcement.

Keywords: Village, Pupils, Disaster Defense, Scientific Literacy.

1. INTRODUCTION

According to the disaster statistic data during the years 2007-2016, 54 persons had died for meteorological disaster averagely in each year in Hebei province, and most of the death occurred in rural areas. In addition to such objective factors as the weak disaster prevention infrastructures in rural areas, the general low scientific literacy on meteorological disaster of farmers and the insufficient disaster prevention and reduction consciousness and capacity are also the key factors that cannot be ignored. The young children is the crowd easy to be threatened by the meteorological disaster for the weaker self-protection ability, and the meteorological disaster defense consciousness establishment and the relevant knowledge and skill reserve of the young children have fundamental significance to the promotion of scientific literacy on meteorological disaster defense of the whole society, for they are in the golden age of learning (Zhou, 2013).

To fully understand current situation of the scientific literacy on meteorological disaster defense of the young children in the rural areas of Hebei province, special surveys are conducted by taking the rural pupils in Hebei province as the main respondents. This paper is given based on the survey on rural pupils in Bashang area, Zhangjiakou, Hebei province, and we issue total 120 questionnaires in this area and withdraw 114 effective questionnaires. The questionnaire is divided into the four parts of basic personal information, disaster defense consciousness, disaster defense knowledge and relevant information demands, and each part includes five questions excepting for the part of basic personal information, thus it can reflect scientific literacy on meteorological disaster defense of the respondents from different aspects (Liu, 2013).

2. CURRENT SITUATION OF THE SCIENTIFIC LITERACY ON METEOROLOGICAL DISASTER DEFENSE OF THE RURAL YOUNG CHILDREN IN AREA, ZHANGJIAKOU

2.1 Condition of the meteorological disaster defense consciousness

This part of questionnaire aims at surveying understanding of the respondents on meteorological disaster defense by mentioning the questions as follows: whether the individual should take the responsibility for meteorological disaster defense, whether the human activities could affect the meteorological disaster, whether it is needed to
transfer the property firstly when facing with disaster, what is your understanding on disaster insurance purchase and disaster defense knowledge learning.

Table 1 Statistical Table of the Condition of the Meteorological Disaster Defense Consciousness of the Respondents

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Do not understand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>QTY</td>
<td>%</td>
<td>QTY</td>
</tr>
<tr>
<td>The defense of meteorological disasters is the duty of the government, and the individual does not need to participate.</td>
<td>7</td>
<td>6.14%</td>
<td>107</td>
</tr>
<tr>
<td>Meteorological disasters have nothing to do with human activities.</td>
<td>0</td>
<td>0.00%</td>
<td>111</td>
</tr>
<tr>
<td>When a disaster needs to be transferred, a good valuables should be first settled and then left.</td>
<td>0</td>
<td>0.00%</td>
<td>114</td>
</tr>
<tr>
<td>The purchase of insurance can reduce the risk of loss</td>
<td>67</td>
<td>57.90%</td>
<td>33</td>
</tr>
<tr>
<td>It is not necessary to learn the defense knowledge of meteorological disasters</td>
<td>0</td>
<td>0.00%</td>
<td>114</td>
</tr>
</tbody>
</table>

It can be seen from Table 1 that: as to the two opinions that life safety is more important than the property safety when encountering with disaster and we can ensure the own safety more effectively by grasping certain disaster defense knowledge, 100% of the respondents show affirmative attitude; as to the question that whether the individual needs to take certain disaster defense responsibility, 6.14% of the respondents believe that disaster defense work is the matter of the government and has no relation with us; as to the question that whether human activities could relieve or intensify the influence of disaster, 2.63% of the respondents show unknown; as to the function of insurance purchase, 29.82% of the respondents believe that we can reduce disaster loss risk by purchasing disaster insurance, and 12.28% of the respondents express that they do not understand the function of disaster insurance.

2.2 Condition of the meteorological disaster defense knowledge

This part of questionnaire mainly aims at surveying the defense knowledge grasping condition of the respondents on such meteorological disasters as thunder and lightning, torrential rain, high temperature and gale, as well as the condition whether the respondents have grasped the flood disaster escape route. The survey results indicate that: as to thunder and lightning, the respondents all know the evasion timely and being far away from such high objects as big tree, while there are still 39.47% of the respondents not knowing that stride movement in open field is prohibited in thunder and lightning; as to torrential rain, there are still 0.88% of the respondents not knowing to be far away from the rivers, and they even select to catch fish in river at the time of heavy rain; as to high temperature, 4.39% of the respondents do not know to avoid outdoor activities in the midday, and 3.51% of the respondents do not know to avoid direct blowing of the electric fan after sweating; as to gale, 4.39% of the respondents cannot select the correct defense method; as to the escape route when encountering with flood, 29.82% of the respondents do not know where to escape.

2.3 Condition of the relevant information demands

This part of questionnaire mainly aims at surveying interests, concern categories and acquisition channels of the respondents on scientific and technological information, as well as trust degree of the respondents on the scientific and technological information acquired from different channels.
Figure 1. The Most Interested Information Type

Figure 2. The Most Concerned Scientific and Technological Knowledge Type

Figure 3. Scientific and Technological Information Acquisition Channels
According to the survey results, only 54.39% of the respondents take the scientific and technological information as the most interested information, and 13.16% of the respondents give more attention to the disaster prevention and reduction information; selection of main scientific and technological information acquisition channels of the respondents is more scattered, and those selecting TV, network and books are relatively more, accounting for 32.46%, 28.95% and 24.56% respectively, there are also 5.26% of the respondents selecting broadcast and expert lectures and 2.63% selecting newspapers and magazines and talk with relatives and friends; as to the option that the scientific and technological information reported by which media is more trustful, the selection is also scattered, 36.84% of the respondents select books, 24.56% select network, 16.67% select TV, 15.79% select broadcast, and 7.89% select newspapers and magazines; as to the option that the scientific and technological information transmitted by which crowd is more trustful, the selection is more concentrated, 75.44% of the respondents select experts and scholars, and 16.67% select the parents.

3. ANALYSIS OF CURRENT SITUATION OF THE SCIENTIFIC LITERACY ON METEOROLOGICAL DISASTER DEFENSE OF THE RURAL YOUNG CHILDREN IN BASHANG AREA, ZHANGJIAKOU AND PROMOTION SUGGESTIONS

3.1 Analysis of the current situation

3.1.1 Aspect of disaster defense consciousness

According to the analysis on this special survey results, most of the young children in Bashang area of Zhangjiakou possess correct meteorological disaster defense consciousness, and there are also some problems existed: firstly,
there are still a part of persons having stronger dependence on the government and lacking the sense of responsibility of participating in the meteorological disaster defense work; secondly, the great majority of the persons do not understand the insurance function of disaster risk transfer, and they even hold the negative attitude and do not establish the self-protection consciousness of reducing risk by purchasing insurance; thirdly, there are still a small proportion of persons not knowing the influence of the human activities on climate change and meteorological disaster and lacking the necessary understanding on the relation between individual behaviors and disaster occurrence and development.

3.1.2 Aspect of disaster defense knowledge reserve

According to the survey results, most of the young children in Bashang area of Zhangjiakou possess certain disaster defense knowledge, and there are still some defects existed: firstly, they can expertly grasp the disaster prevention knowledge and skills mentioned frequently, while they are lack of understanding on the disaster defense knowledge with less publicity or slight depth; secondly, the great majority of the persons do not know the surrounding escape routes, and they cannot escape safely and timely when encountering with disaster.

3.1.3 Aspect of relevant information demands

According to the survey results, most of the young children in Bashang area of Zhangjiakou show lower learning interests on the scientific and technological information, especially for the disaster prevention and reduction knowledge, while the relevant information acquisition channels are more abundant, and they show the most trust on the scientific and technological information acquired from books, experts and scholars.

3.2 Promotion suggestions

Firstly, we shall strengthen the cultivation of the learning interests of the young children on scientific and technological information, especially for disaster defense knowledge, for interest is the best teacher. The young children can learn and spread the relevant knowledge independently with interest, thus they can promote the own scientific literacy on meteorological disaster defense and drive the classmates at the side and even the parents.

Secondly, we shall enrich the meteorological disaster defense knowledge popularization channels, and spread the knowledge widely in such forms as cartoon and children’s song loved by the young children (Wang, 2014). By attaching the dull disaster defense knowledge with lively and interesting representation forms and rich spreading routes, it shall be easier to cause learning interest of the young children, and the audiences could acquire the relevant information timely thereof.

Thirdly, we shall update the science popularization content on disaster defense timely by combining with the practical situation, give different science popularizations in different disaster easy-happening time periods and areas, and provide the young children with more comprehensive disaster defense knowledge conforming to their acceptance capability by the media, mode and persons trusted mostly by the children (Jin, 2015).

Fourthly, we shall take effective measures to guide the young children establishing the subject consciousness and sense of responsibility of disaster defense from childhood at the same time of popularizing the meteorological disaster defense knowledge vigorously. If the general public merely possess disaster defense knowledge and do not have the responsibility consciousness of disaster prevention and reduction, they shall be easy to show the emotion of waiting and dependence or seeking for self-insurance when encountering with meteorological disaster, then it shall be hard to form the resultant force for disaster resistance, and the actual effect of the promotion of the scientific literacy on meteorological disaster defense shall be discounted greatly (Wang, 2013).

Fifthly, we shall strengthen the frequency and dynamics of the emergency exercises answering the various disasters, so that the young children could grasp and learn the various meteorological disaster defense knowledge expertly and select the correct escape routes and ways when encountering with disaster, then their comprehensive quality of answering the meteorological disaster can be promoted. (Zhang, 2016)

REFERENCES


