



Construction, Perception and Strategies of Health Risk: The Interview of HPV Vaccination among Chinese Young Women

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Abstract

Risk has emerged as a dominant cultural aspect of modern society as well as a central theme in contemporary discourses. This study focuses on “health risk” through the interview of HPV vaccination’s meaning among young Chinese women for two purposes. First, explores the social construction and transmission of HPV risk through the discussion of discursive strategies. There are three main ways to learn about the vaccine: first, introduction by people they know, second, media publicity, and third, school education. A second purpose is to place the risk perception and women's vaccination decisions in the context of the social milieu in which they occur. According to the results of narrative analysis, interviewees can be divided into two main groups according to the extent to which their actions are influenced by external information: formalists and self-awareness. The latter group shows a higher level of reflexivity than the former group in making the HPV vaccination decision. The group with self-awareness also demonstrates a strong sense of self-body management. Despite individual’s reflexivity level varies, it is clear that risk calculation conscious is prevalent when pursuing HPV vaccine. On the one hand, risk calculation reflects human self-reflexivity and reason, as defined by neoliberalism; on the other hand, it also reflects that future hazards are influencing current activities, the future, is central to risk awareness. At this moment, people are taking proactive action to prevent, mitigate or prevent the challenges and disasters of tomorrow and the day after.

Keywords: health risk, gender, reflexivity, HPV, vaccination

1. Introduction

'Risk' has become one of modern society's defining cultural features. As in other spheres of life, 'risk' has become central to discourses related to individual health (Hayes, 1992); that is, risk has become a common construct around which health in society is described, organized, and practiced, both personally and professionally (Allen, 1996). A common theme in much of the social science literature on risk is that the 'new' risk consciousness reflects a new social, political, and moral order (Robertson, 2000; Wynne, 1996).

Health risk has received attention from researchers as a common type of risk. Cervical cancer, for instance, is a leading cause of death among women; it's also the only cancer with a known cause that's both treatable and preventative, thanks to HPV vaccination. The demand for 9-valent HPV vaccine in China far outnumbers its supply, and scalpers benefit handsomely as a result. This circumstance demonstrates cervical cancer risk has become a major concern for women, particularly the younger ones. So, after young women perceive HPV risk, what strategies they choose?

This research will first review the related research about the construction, perception, and strategies about health risk. Then, selecting HPV as the aimed one, using interview to explore the construction and transmission process of 'risk'; meanwhile, situating the risk perception and women's vaccination choices within the social and political context within which individual experience occurs. The reflexivity--as a fundamental human quality underlies various attempts during this process--is also considered (Holland, 1999).

2. Literature Review

2.1 Modernity and Risk Society: The Background

According to Giddens, today people stand at the opening of "post-modern" era with its nature "modernity". In this "post-modern" society, one core feature is the "discontinuities", which means modern social institutions are distinct in form from all types of traditional order. More specifically, by "lifting out" of social relations from local contexts of interaction and their restructuring across indefinite spans of time-space, it achieved the disembedding of social systems (Giddens, 2013).

Post-modern society is also a risk society. Essentially, the risk of post-modern society comes from a grasp of the fact that most of them which affect human activity are humanly created, rather than merely given by God or nature (Beck et al., 1992). Derived from social characteristics of modernity, it makes us possible to separate risk with danger and able to cope with those risk with rationality and reflexivity.

2.2 The Construction of Health Risk

2.2.1 The "Discourse Constructivism" of Foucault's Doctrine

How does those humanly-created risk constructed, coped by human in social life? Constructivists point out that language is not a naturally neutral symbolic medium, but a constructive tool that embodies certain purposes of social actors, and thus language is at the center of the constructivist movement. In the framework of social constructivism, "discourse" and "power" conspire closely to restrain and regulate the behavior of individuals according to the discourse constructivism of Foucault's doctrine (Foucault & Colin, 1980).

The operation of power results in the establishment of any dominant discourse, and society preserves order through disciplined knowledge and codified legislation in the battle of various powers. To put it another way, discourse is formed in the service of specific practices, enmeshed with a variety of forces in the socio-cultural network, and relying on specific

strategies and power tactics to do so. Discourse also reacts to power, as one of key functions is "empowerment". First, discourse is a vehicle for power in specific situations, which shapes social relations by distributing power among individuals; second, discourse is a vehicle for structural power, which becomes a structural force under the guise of habits, conventions, and institutions; and finally, discourse endorses the foundations of power, thereby enabling the construction of meaning and the production of truth.

That is, "discourse-power" acts on "body-subject", forming an ideology, and constructs the subject by taming the body into a productive force, or in other words, in the form of discipline or punishment as you will (Foucault, 1987). As a result, the "docile bodies" are continuously produced through the implementation of a series of governance techniques.

Foucault's theory of "discourse-power" weakens the individual into a docile and controlled body, seemingly denying the possibility of freedom and resistance.

2.2.2 Neo-Medicalization

In contrast with Foucault's explanation, Neo-medicalization emphasizes that in the context of neoliberalism, individuals are aware of possible future health risks which often have not yet occurred, and they are able to take charge of medical technology to cope with these risks. With further development of modernity, this awareness of the risk getting disease has become more and more reflective through self-examination, self-care and self-improvement, individuals are competent to make self-management.

In other words, individuals have reflexivity, so they can make self-management instead of totally derived by the discourse-power and techniques.

2.3 Women's Perception and Reaction of Health Risk

Recently, there has been several studies specifically investigating women's perceptions of risk for cervical cancer and HPV, as well as their willingness to get vaccination (Polzer et al., 2014). According to results of a study in which the types of evidence (statistical, narrative, or hybrid) and narrative style (first-person, third-person, or hybrid) are studied in relation to the perception of risk about human papillomavirus (HPV) and behavioral intentions to get the vaccine, a hybrid message containing both statistical and narrative descriptions of HPV was associated with greater perception of risk for HPV infection than one that contained only one type of information, either statistics or narratives. Moreover, the first-person narrative message led to greater risk perception about HPV than the third-person narrative message (Nan et al., 2015).

Among female college students, a study conducted to determine the relationship between HPV-vaccine usage and risk perception indicates that women who are better knowledgeable about HPV are more likely to view vaccination against the virus favorably and to get the shot. In an online survey of lesbian and bisexual women ages 18-26, HPV vaccine initiation was higher among respondents who were students, had received a healthcare provider's recommendation, perceived greater positive social vaccination norms, or anticipated greater regret if they did not get vaccinated and later got HPV (McRee et al., 2015). The rate of initiation was lower among individuals who believed the HPV vaccination would cause more damage or would provide more obstacles to receiving it.

Some studies have looked at the effect of online social networks and media on HPV vaccination intentions and uptake while taking the larger social environment into account. For instance, a study of over 250,000 tweets related to the HPV vaccines in the United States (between 2013 and 2015) found that vaccine coverage was lower in states where there was a higher proportion of exposure to safety concerns, misinformation, and conspiracies. For instance, a study of over 250,000 tweets about HPV vaccination in the US between 2013 and 2015 found that vaccine coverage was lower in states where there was a higher proportion of

exposure to safety concerns, misinformation, and conspiracies. This finding suggests that negative media portrayals of vaccines are linked to (either reflecting or influencing) HPV vaccination (Dunn et al., 2015). Similar results were seen in a population-based retrospective cohort analysis of all Danish girls born between 1997 and 2006; times of intensely unfavorable media coverage were linked to significantly lower HPV vaccination rates (Hansen et al., 2015). The introduction of a national information campaign (alongside a catch-up program) was associated with some recovery in vaccination rates, but still left many older girls unvaccinated who may have otherwise received the vaccine (Hansen et al., 2015).

It suggests that gaps in knowledge and misconceptions about HPV risk could be themes for awareness campaigns promoting increased use of HPV vaccine prevention (Licht et al., 2010). All the studies highlight the importance of quick and proactive response to manage public concern including track public sentiment and social media, use evidence-based communication methods. Healthcare provider recommendations and women's health beliefs may be key leverage points for increasing vaccination among young women (Dunn et al., 2015).

Most studies that have evaluated women's perceptions of cervical cancer and HPV, with a few exceptions, have used psychosocial assessment methods and structured interviews. Even though such studies shed light on the ways in which women construct perceptions of risk for cervical cancer and HPV, they have several drawbacks as well. Often, in these studies, whether using standardized instruments or interview questionnaires, the questions reflect the issues and research agendas which are of interest to the researcher, and do not provide an opportunity for other issues to be raised. Further, such methods fail to provide a thorough exploration of subjective experiences and meaning that give rise to health risk. It is crucial to understand the HPV's unique experiences through their own lens, given that quantitative data alone are not likely to capture the information needed to deliver effective prevention services to this population. In-depth qualitative study can complement investigation-based work by providing greater detail and complexity about women's experiences.

This study explores the subjectivity and self-reflexivity expressed in the HPV vaccination information from the interviewers' perspective through the analysis of their personal narratives.

3. Methodology

In this study, the researcher wants to explore the subjective meaning of health risk and HPV vaccine. Therefore, qualitative method is the ideal choice, and semi-structured interviews will be used to gather data for exploring subjective meaning from the young women's perspective within the social and political context.

3.1 Setting

There is no predetermined sample size for interviews; instead, it depends on how broad the study question is (Emmel, 2013). Additionally, Patton (1990) stated that there are no touchstone for sample size in qualitative research and that sample size is determined by the purpose of the inquiry, what will be appropriate, what will have credibility, and what can be accomplished with the time and resources available. The purpose of this study is to reveal the meaning of health risk within the HPV vaccine acquire. In light of the inclusion criteria, which include having gotten the HPV vaccine or having a strong desire to do so, 15 highly educated women are chosen to participate in this interview. Contacting via WeChat and receiving consent from the respondents, the researcher set the day and time based on the availability of the respondents. Due to the pandemic, virtual interviews using Tencent Meeting were done utilizing semi-structured guided questions.

3.2 Procedure and Participants

The three stages of this interview process are pre-interview, during the interview and post-interview stage.

In the first stage, the researcher posted an introduction to this study on WeChat Moments, and women who meet the criteria can voluntarily apply for it. Decisions are made based on the order in which women apply and their introductions to HPV stories and understandings. Fifteen women based on the inclusion criteria were selected. The basic requirement for interviewees is that they have received or have the desire to acquire the HPV-9 vaccine. Due to the specialty of this vaccine, the age range is confined to 18-25 years old. Then, the researcher contacted them personally through WeChat platform. Next, a voluntary consent to participate in this interview session was obtained. The researcher then scheduled the participant interview session's specifics, including the day, time, and manner of the interview. The researcher then sent them an invitation via WeChat.

Given the pandemic circumstances, the online interview using Tencent Meeting was done utilizing semi-structured guided questions. Beginning with welcomes and introductions of both interviewer and interviewee, the researcher went on to describe the goals of the interview session, how to interview respondents, record interview data, and conclude the interview session. The researcher then requested participants to complete the informed consent form and return it. The conductor subsequently began asking the interview questions listed in the semi-structured interview guide. In order to obtain more information, the researcher have occasionally utilized probing approaches. She also recorded and took notes on the respondents' opinions. The average interview lasted over 40 minutes. After that, the researcher summarized the interview session and offer questions, suggestions or thoughts from the interviewees. The researcher then offered each interviewee a memento of appreciation in order to show her gratitude and joy for their assistance. The interview was conducted by Chinese.

Table 1 shows the interviewees' basic information. The interviewees were highly homogeneous, with a high level of education and a background in the humanities and social sciences. The interview outline is included in the appendix section.

Table 1. Interviewers' Basic Information

Number	Nickname	Age	Education Level	Major
1	Ran	22	Graduate student (first year)	English Linguistics
2	Hang	22	PhD candidate	Media Studies
3	Wen	22	Graduate student (first year)	Sociology
4	Qin	23	Graduate student (first year)	Public Administration
5	Hui	22	Graduate student (first year)	Anthropology
6	Lei	22	Graduate student (first year)	Anthropology
7	Lu	23	Graduate student (first year)	English Literary
8	DZ	23	PhD candidate	Anthropology
9	Yin	21	Undergraduate student (senior year)	Communication and Media
10	CH	23	Graduate student (first year)	Pedagogy
11	Wei	22	Graduate student (first year)	Sociology
12	Bi	20	Undergraduate student (senior year)	Social Work

Number	Nickname	Age	Education Level	Major
13	Shuo	23	Graduate student (first year)	International Relations
14	Bei	22	Graduate student (first year)	Philosophy
15	Feng	20	Undergraduate student (junior year)	Sociology

3.3 Analysis

In the post-interview stage, the data from the interviewees were transcribed verbatim, coded and themed according to the research objectives.

Narrative Analysis is included to analysis the content of interviews. Narrative analysis refers to a bunch of approaches to diverse kinds of texts, which have in common a storied form. What makes these various texts "narrative" is the order and consequence: events are selected, organized, connected, and assessed as signifying to a particular audience. Storytellers interpret and experience the world; they create moral tales at times – how the world should be. Narratives is about storied ways of knowing and communicating (Riessman, 1993). In this paper, thematic analysis of the personal meanings of cervical cancer risk and HPV vaccination which emerged in women's accounts are presented. To find the latent pattern concerning their strategy for gathering information about the vaccination and body management awareness from the views of various participants, as stated principally in their words, the researcher utilized a continual comparative method, marked by an iterative procedure. First, separating the content of the transcriptions into the main topics covered in the semi-structured interview (i.e., the channel to get HPV information, the motivation to pursue vaccine). Then, in each topic, reviewed transcribed interviews with a view to deciding what codes fit the concepts suggested by the data. Each code was constantly compared to all other codes to identify similarities, differences, and general patterns. The coding process came to an end when "theoretical saturation"—in other words, when further data unable to yield any fresh content about the emerging theory—occurred.

4. Results

4.1 Construction and Transmission of Health Risk

4.1.1 The Awareness of HPV Risk

All 15 interviewees said that they learned about the vaccine before they knew the existence of the virus, that is, they built their knowledge of the virus through their knowledge of the vaccine. And there are three main ways to learn about the vaccine: first, introduction by people they know, second, media publicity, and third, school education.

Also, it is noteworthy that none of the respondents' narratives obtained their knowledge about HPV risk from government websites, which is slightly different from the initial hypothesis. Or, as Foucault suggests, on the one hand, schools, as a system of discipline, use discourse as a political means of transmitting economic and cultural information and as a tool for producing "truth" and imposing knowledge on students (Foucault, 2007):

"I was aware of this vaccine and virus through school. When I was a freshman, my university's health office provided me with the option to obtain the vaccine as well as a lot of promotional materials, and after reading them, I felt good and needed, and deep down, I thought that my institution was a reliable and authoritative system. (Ran, no.1)"

"I think that the teacher, in some ways, represents authority, and that the teacher should be accountable for speaking to the students; if this thing (vaccine) were not safe enough, it would not be spoken in the classroom; as indicated, the technical risk is acceptable. (Wei, no.11)"

Teachers utilize a "sacrosanct" language, a language of inviolability, in the classroom to emphasize their power over students. With the power of this language, teachers can not only smoothly discipline students, but also confine them to a particular type of discourse that becomes dogmatic.

On the other hand, the media can exert discursive or ideological power. By reproducing ideas and intentions, the media can influence people's thoughts and actions, so that audiences make judgments about world events based on the "truth" conveyed by the media and build common sense about the world, in this case is the risk of HPV.

Through these three channels, respondents were aware of the possibility of contracting the HPV, but the perception of this possibility differed from one respondent to another.

Some were worried that infection with HPV would lead to more serious consequences, i.e., cervical cancer, and considering the high prevalence of cervical cancer in the female population, they perceived themselves as having a high health risk, and accordingly, their perception of the health risk of HPV infection was higher:

"I believe that I (as a member of the female population) am at a reasonably high risk of contracting the virus because the female population has a high risk of developing cervical cancer and is vulnerable to the HPV. (Ran, no.1)"

She connects her own experience to the experience of the female as a whole in her narrative, saying that her personal experience cannot be divorced from the experience of the female population.

Since sexual life and HPV transmission are closely related, the perception of the risk of HPV infection among the interviewees differed depending on the individual's sexual life situation:

"...I think (my) risk of getting the virus is very low because (I) had only one boyfriend before the vaccination, and I haven't had sex in the last two years, so there is basically no risk of getting infection. (Hang, no.2)"

"...I'm at a high risk of infection considering my sexual activity, and I know that many guys don't pay attention to their personal hygiene. (Fu, no.12)"

4.1.2 The Enchanting of HPV Vaccine: Trust of Disembedding Mechanisms

When asked about their perceptions of the HPV vaccine, all respondents, regardless of their vaccination knowledge, considered the HPV vaccine to be a good thing. So, what does "good", a term full of generalizations, mean?

"It means being healthy and not worrying about the risk of getting the virus when you have sex. (Qin, no.4)"

"...it can provide a sense of psychological security, just like buying a reference book will give you a feeling that you will pick up knowledge immediately, getting vaccination makes you feel that you will not catch the virus or get cervical cancer. (Wei, no.11)"

From their narratives, the trust exhibited by the interviewees in vaccines reflects the trust people place in expert systems in modern societies, as suggested by Giddens.

As mentioned above, the core feature of post-modern society is "discontinuities". In other words, the disembedding of social systems was achieved by reorganizing social interactions across indefinite stretches of time and space as well as "lifting out" social relations from local contexts. And all disembedding mechanisms, both symbolic tokens and expert systems, depend upon trust. Trust in abstract systems is the condition of time-space distancing and of the large areas of security in day-to-day life which modern institutions offer as compared to the traditional world (Giddens, 2013). Trust is therefore involved in a fundamental way with the institutions of modernity.

Trust may be defined as a faith in the credibility and reliability of a person, system, or event, expressing a faith in the goodness of another, or in the correctness of abstract principles (technical knowledge):

"I have a high level of trust in the professionals... as for some side effects, I believe that since it has been adopted for such a long time and so many people have gotten vaccination, it is trustworthy. (Lei, no.6)"

"I don't know much about disease, because it is something external to me; I go to the doctor when I'm unwell, and I trust the doctor can help me cure disease. (Wen, no.3)"

"I believe in doctors, the media, and science because the vaccine was developed for the public's benefit, and it appears that the vaccine was first developed in the United States. In fact, foreign research indicates that they tried earlier, implying that our country is conservative. ...Since the vaccine was introduced, it must have been evaluated and some unfavorable factors must have been removed as much as possible, for example, the age of vaccination was restricted. Since the scientific data shows that it is effective at this age, the vaccination will be given at the age specified in the data. (CH, no.10)"

Risk and trust are interwoven, with trust normally used to reduce or minimize the hazards to which certain types of activities are subject. Under the conditions of modernity, abstract systems brought much security into daily life that was absent in pre-modern orders. A large amount of "surrounding" knowledge is required to be able to get vaccination, and this is knowledge which has been filtered back from expert systems to lay discourse and action. One has to know what a vaccine is and very many other things besides. But security on the vaccine itself does not depend upon mastery of the chemical composition which make it possible.

Modernity is characterized by the integration of attitudes of trust towards abstract systems into the continuity of day-to-day activities and, to some degree, enforced by the intrinsic circumstances of daily life as follows:

"Science and scientific debate are encouraged by the government, (under this situation) social trust is created. (DZ, no.8)"

"People do not believe there are any hazards associated with vaccines, as appears to be the case in China, and the system obliterates the perception of risk so that people are not even aware of it. (Feng, no.15)"

"The herd effect makes those around you vaccinated drive you to want to get it. It is true that we ourselves do not know enough about vaccines themselves and do not think enough about them, reflecting a trust in authority. It is also more likely that we doubt ourselves in our daily lives rather than question the technology itself. (CH, no.10)"

"In contrast to foreign people, Chinese people choose low risk to great profit. When it comes to drug treatment, the country is still conservative. In general, any drug you can get in mainland China basically has little side effects. So I think it's actually okay to get it, since China permits, it means there is no problem. (Yin, no.9)"

Trust in systems takes the form of faceless commitments, in which faith is sustained in the workings of knowledge of which the lay person is largely ignorant:

"As for myself, I depend on outside information and believe in experts, such as browsing Dr. Dingxiang's WeChat public page frequently and believing statements it makes. (Fu, no.12)"

4.2 Self-Management of Body: Reflexivity

4.2.1 Managing Uncertainty

Preventing future uncertainty motivates young women to get vaccinated. In other words, future risks determine present behavior, and people make rational calculations and considerations about risks.

"It is true that the vaccine carries a little risk today, but if you get the disease in the future, the cost of treatment will be considerably higher than now, so I think the vaccine is worth it. If

conditions allow, you should get the nine-valent, as the time limit means it will work better. (Bei, no.14)"

"(Vaccination) is to prevent getting sick, which is better than getting sick afterwards and then treating it, and vaccination is better than no vaccination at all. (Hui, no.5)"

"It's better to get vaccinated than not to get vaccinated at all. It's better to prevent the disease before it happens, the risk is more negative, after all, cancer is still very difficult to cure, why not do it if you can eliminate it? (Hui, no.5)"

Other respondents also took into account the risks of the vaccine technology itself and chose to get vaccinated after thorough consideration. The fact that people are contemplating the risks of medical technology is a reflection of their self-reflexivity.

"I have accepted the risk of being forewarned (of the vaccine itself). When you do something, you will do it only if you think the benefits outweigh the risks. (I see the good (in vaccination), but I also accept the possible bad. (CH, no.10)"

"Modern young women are more thoughtful, and unlike older generations, we young women have access to a variety of information and a more rational understanding of modern science, whereas older generations may be more blindly obedient. (Qin, no.4)"

4.2.2 Gendered Risk Attribution: Taking Individual Responsibility

Many interviewees believe that HPV vaccination is evidence of self-responsibility, that they have done everything they can to protect themselves from HPV, and that it demonstrates their sense of personal responsibility:

"Psychologically, I think it's frightening to be exposed to an unknown virus, but after getting the shot you will feel that you have gained protection, isolated yourself from the risk, and can pursue your sex life more safely; and that you have done your best to protect yourself and be responsible for yourself, and that's enough. (Hang, no.2)"

"More and more people are going to get it, and many people may not care too much about spreading this virus, and some people may even acquiesce that you have been vaccinated, so it is enough not to expose yourself to a risky environment, or at least to do what you can to make yourself not regret it. (Lei, no.6)"

"(Vaccination) means that I have done my own safety protection, and some time ago I went to the hospital to check whether I had developed antibodies. (Lu, no.7)"

Some women also place this responsibility within the framework of gender, believing that HPV and cervical cancer are closely related to women and that they have a responsibility to pay more attention, reflecting a gender-attributable risk awareness:

"It is my regular habit to follow self-published health articles on women's health, and I see that women are more likely to suffer symptoms of HPV when infected; ...I'd like to place this virus in a female framework, believing that it is different from ordinary diseases... I think women need to pay closer attention to women-related diseases, particularly HPV, cervical cancer, and other women's diseases; also, I'm willing to grasp related knowledge more deeply. (Wen, no.3)"

"...stories of friends around me encountering scum made me extremely worry about men's hygiene. Indeed, I think that as a woman, especially a heterosexual, I should be more concerned about my health risks. In fact, women and man are not equal, because as far as I know, women are infected with this virus more because of men, but it is up to women to take this risk themselves. (Lu, no.7)"

"Many times women who get ill are blamed and questioned that they don't take care of themselves, but no one considers how they get the disease in the first place. I feel angry whenever I hear about such things, but there is not much I can do as a woman, as someone who needs to pay attention to her own health, in order to protect herself. (Shuo, no.13)"

4.2.3 Body Management: As a Fashion

In addition, another common characteristic of women who see vaccination as a sense of personal responsibility is that they have a strong sense of self-management of their bodies. They believe that concern for health risks is an important part of women's self-body management, and this awareness is practiced in other forms in their daily lives:

"I usually pay close attention to health management, like monitoring heart rate through the apple watch, as well as reading many books to gain a better understanding of health-related knowledge. (Lu, no.7)"

"I am highly concerned of my physical well-being and will work out with friends. If a friend becomes ill, I automatically assume it is due to a lack of exercise. I also believe that gender awareness is linked to the pursuit of health and better understanding of women's self-management of their bodies. (Bi, no.12)"

5. Discussion

This article addresses "risk" in two ways: first, this research offers multiple types of tales in which HPV as a health risk is formed, transmitted, and perceived through the examination of interviewees' narratives, and concludes that social networks, media, and school systems play essential roles in the production and transmission of risk.

In response to their differing estimates of their own chances of HPV infection and the amount to which external information influences their actions, respondents were divided into formalists and self-awareness. The former decided to get vaccinated more because they were influenced by individuals around them and saw HPV vaccination as a kind of homework, and vaccination was a kind of herd behavior in their perspective.

The latter group has a strong sense of self-body management, and they will take the initiative and make conscious self-prevention for potential health risks, and this sense of self-body management extends to other aspects of their everyday lives. As a result, vaccination is a well-considered self-decision for this group, which passes through the steps of understanding-evidence-reflection and is the outcome of rational thinking based on resources obtained from peer groups, medical authorities, and internet media. Their decision-making process was reflective of themselves.

The two groups also showed different perceptions of the possible risks of vaccine technology itself. The formalists did not consider the potential risks of vaccination technology and instead placed their trust in the professional system; additionally, as previously said, this trust in the expert system was founded in and exhibited via trust in the political system in which they lived. To put it another way, people's trust in the political and cultural context in which they live is inextricably intertwined. Most awakened people took into account the uncertainty of the vaccine technology itself, specifically by comparing the risk of getting the disease in the future with the risk of the vaccine technology itself, as well as the cost of medical treatment if they got the disease in the future with the time and effort spent on vaccination now, and concluded that the potential risk of vaccination itself was less and that they should be vaccinated within the limits they could accept.

5.1 The Third Kind of Risk

The HPV-9 valent vaccine in China is currently in short supply, which leads to a third type risk not covered by previous researches. "Rare things are expensive," and the scarcity increases people's desire to obtain them. *"Vaccination of HPV-9 valent vaccination is a fad, or an identifying symbol (Shuo, no.13),"* remarked one interviewee. Getting an HPV-9 valent vaccination is not just a protective measure against health risks; it is also influenced by consumer psychology, making HPV vaccination a marketing tactic to some extent.

New risks are also posed by scalpers' high charges and illicit organizations' production of fake vaccinations, which is accompanied by social media and media campaigns. The co-occurrence of media misinformation and scalping hype, as some interviewees pointed out, is very much like a conspiracy. In some ways, the possible health concerns are exaggerated, resulting in an exaggerated health risk. It is possible that many misinformed people fall into a set-up trap without realizing it.

5.2 Limitations

The investigation of potential differences in terms of a variety of social locations — race/ethnicity, mother tongue, sexual orientation, education background — representing different experiences of embodiment, was not possible. All interviewees were recruited through WeChat moments, although the interviewees each came from a different family background, there was a high level of education homogeneity (asserted by the fact that all had at least a bachelor's degree and were trained in humanities and social sciences), and social stratification has little bearing on this study.

6. Conclusion

This research offers an in-depth investigation among young women about the individual meaning of health risk which incites their acquisition of HPV vaccine. Participants perceive health risk via social networks, school systems and media. Based on the amount to which external information influence their action, they can be divided into two groups: self-awareness with high-reflexivity and formalists with low-reflexivity. Despite individual's reflexivity level varies, risk calculation conscious is prevalent when pursuing HPV vaccine.

On the one hand, risk calculation reflects human self-reflexivity and reason, as defined by neoliberalism; on the other hand, it also reflects that future hazards are influencing current activities, the future, is central to risk awareness. At this moment, people are taking proactive action to prevent, mitigate or prevent the challenges and disasters of tomorrow and the day after. The factors motivated vaccination behaviors were complex in participant group, researchers should pay more attention to time continuity and reflexivity rooted in people's action when analysis their narratives.

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Appendix: outline of the semi-structured interview questionnaire

- I. Basic information
 1. Age.
 2. Occupation.
 3. Education level
 4. Chance of contracting HPV virus (self-estimate)
- II. Access to information
 1. How did you first learn about the HPV vaccine (when, where, and how)? How did these related contents describe HPV vaccine? What perception did it leave you with? (Describe in detail)
 2. After initially receiving this information, did you intentionally seek and gather further information about the HPV vaccine on your own? If so, through what channels did you do so? How did this information help you develop an understanding of the vaccine? (Do you understand the specific efficacy, safety, and adverse effects of the HPV vaccine? Do you have a clear understanding of the classification of suitable/unsuitable groups for vaccination, and do you have any idea whether you are suitable for vaccination?)
- III. Vaccination decision
 1. What was the first decision you made after the initial understanding of HPV vaccine (ready to get the vaccine at once / determined not to get the vaccine / wait-and-see attitude)? What were the considerations that led to this decision? (Did you have any hesitation or doubt in the process of making the decision, what kind of hesitation or doubt did you have, and why, please describe in detail)
 2. What information influenced your initial decision the most in the process of making this decision? (e.g., media, government, people you know, organization/school/community, etc.) Please describe in detail.
 3. What benefits do you think HPV vaccination will bring to you? Would you recommend vaccination to women around you?
 4. Do you think there are risks associated with the vaccine technology itself?