

**BECOMING A REFLEXIVE RESEACHER THROUGH A CRITICAL EVALUATION INTO THE
HEALTH AND WELFARE IMPLICATIONS INTO IMPORTING HORSES INTO CHINA**

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HEALTH AND WELFARE IMPLICATIONS INTO IMPORTING HORSES INTO CHINA**

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I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

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Abstract

This study was conducted in order to identify the issues of the welfare of imported horse in China and suggest some recommendations for future consideration by investigating the situation within the industry, using targeted interviews with club owners, horse trainers, stable managers, leading riders and veterinarians of various of riding clubs in China.

The study used a mixed methods approach to including interviews to ascertain some quantitative data about the number of horses imported in selected clubs as well as a reflective approach to analyse the perception of husbandry and welfare practices: the quantitative part and the qualitative part. The former aims to evaluate the health and welfare standard of keeping horses in China through using scientific researches as reference, which will be written in the scientific way. The second part aims to evaluate welfare awareness in China using Interpretative phenomenology analysis (IPA), which will be written from the first-person perspective. In this part, the researcher's own journey of becoming reflexive will be involved to suggest how the journey has changed her and what difficulty has been encountered during the study. IPA is employed to examine the interviewees' true attitude towards equine welfare, as well as how personal experience could have cultural impacts on opinions towards those attitudes.

In general, the result suggested that the equine welfare in China could be improved in its horse importation process, isolation standard, feeding plan, stable design, horse training, body conditional score and disease treatment. The Chinese equine welfare is facing the problem of land limitation, lack of restriction, lack of action and lack of awareness. The study also suggested that the veterinary condition in China was poor due to the generation gap formed with the introducing of Licensed veterinary Qualification examination in 2009, vets' superiority, underdeveloped clinical facilities, equine hospital number shortage and unethical diagnosing process.

Through the medium of equine welfare and the growing equine industry, the researcher has become reflexive with the recognition of cultural barriers, and husbandry and welfare shortfalls. This resulted in a unique and inconclusive example of how an ordinary Chinese student learn to understand equine welfare concepts which could be used as a successful example of overcoming culture barrier and develop welfare awareness. This is meaningful for the future development of Chinese equine welfare.

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Chapter 1: Introduction

1.1 Topic justification:

Horseback riding is gaining in popularity among China's wealthy and middle class in recent years. The average annual growth rate of equestrian club memberships in China is 68%, reaching just under 1 million members by the end of 2017. As its current rate of growth, club membership will surprise many European countries in just a few years and with no signs of slowing down (CHF, 2018). As a result, imports of live horses by the racing industry, equestrian clubs and by wealthy individuals for racing, leisure riding and competition are on rise. The number of riding club in China has increased to 1452 by the end of 2017, with 68% average annual growth rate for club membership. More than 20,416 horses were purchased by Chinese horse clubs in 2017, 63% of which were imported (CHF, 2018). Due to Trump's new policy towards China in 2016, there was a ban on export of expensive goods such as horses. this conflicted with the development of western riding in China with the biggest International Cowboy Festival held in Hebei in 2017 and the emerging of Reining event. This increased the demand for Quarter horses for this growing discipline. The restriction has now been lifted since the policy change in America (Independent, 2017), allowing the number of imported horses in China to increase in the future.

As a consequence of importing horses, there is a need for awareness of health, welfare and disease prevention to safeguard the equine population. There has not been a specific record of the health problems or documentation on the influence importation may have on the horses' performance. The welfare standard of these imported horses remains vague. With the economic impact, geography and climate for horses and the structure of the Chinese equine industry being studied in 2015 (Ede, 2015), limited information can be found about equine welfare.

The animal welfare system's development takes time and people's welfare awareness is the most important thing during this process. In the UK, equine welfare is considered one of the best across the world and has higher standards than other European countries, people's welfare awareness started from farm animals. After the Second World War, the shortage of food resulted in the expansion of livestock kept more intensively for food production and development of the economy. And scientists were educated into the way of thinking even higher mammals did not feel pain or suffering in the way that we could related to. Even vet went along with this thought. The situation changed when a book called Animal Machine (1964) was published making the public more aware of intensive farming system and animal suffering. The result was the Brambell report (Brambell, 1965) which worked with farmers and consumers to construct some minimal standards to improve welfare. The Farm Animal Welfare Council explained these guidelines to the '5 freedom' of farm animals' welfare in 1979. Nowadays, UK has the Red Tractor, which is a world leading farm and food assurance scheme that provides traceable, safe food, to remind people of farm animals' welfare in their daily lives (Red Tractor, 2019). Royal Society for the Prevention of Cruelty to Animals (RSPCA, 2019) helps animals in England and Wales to ensure their welfare. In China, however, the welfare awareness of farm animals is poor with lots of critics towards it (Think Again, 2012). Whereas in the UK, the duty of care which was stated in the Animal Welfare Act of 2006 (DEFRA) and there is now recognition of animal sentience. Things changed in China during

recent years with the China Environmentalism Movement in 2013 which made Animal Welfare a popular topic in China (China Dialogue, 2013). In 2017, World Farm Animal Welfare Conference was held in China to enhance the farm animals' welfare (Ministry of Agriculture of the People Republic of China, 2017). As for horses, in the China Horse Fair 2018, welfare featured as one of the major topics across Chinese equine industry and many organisations such as the Hong Kong Jockey Club are trying to monitor and improve the welfare of horses in Mainland China. However, unlike the UK where animals' welfare awareness is common within the country where the general public is a nation of animal lovers and a legal system that protects animals (the protection of Animals Act 1911 replaced by Animal Welfare Act 2006), the animal welfare awareness in China came from the influence of the West (China Dialogue, 2013). Therefore, culture barrier is one of the biggest challenges in the development of the Chinese animal welfare system. This study is conducted to investigate the equine welfare awareness in China and cultural difference will be considered throughout the analysis. The researcher will use her own experience and own standard of judgement of equine welfare through this research.

By scoping the welfare regulations and recommendations of other countries, this study will identify the clearly-defined equine welfare codes of the majority of the countries that are importing horses into China. In the UK, the National Equine Welfare Council is a united voice on welfare matters, working with representatives from several welfare charities resulting in equine industry welfare guidelines and codes of practice for welfare organisations (NEWC, 2009). In the USA, the American Association of Equine Practitioners (AAEP) was founded in 1954. This association's aims are to improve the health and welfare of horses, to further the professional development of its members, and to provide resources and leadership for the benefit of the equine industry (AAEP, 1954). World Horse Welfare is another organization that has been working since 1950's to improve horse welfare in European countries such as France, Spain, Greece and Germany. They work across Europe with horses, horse owners, the veterinary profession, sports bodies and government to ensure law enforcement to promote and protect the welfare of horses through education, campaigns and hands-on work (WHW, 2019).

A developed Chinese equine welfare system is achievable through attracting more and more attention within the industry today and using the existing systems of other countries as models. However, it is a hard process because of the lack of relevant studies, as well as the cultural barriers. Horse-keeping has been a necessary part of Chinese culture with people in Mongolia and Xingjiang keeping horses as a part of their daily life for centuries. The modern horse industry, however, is centred around the developing area of leisure and therefore the traditional breeds and extensive husbandry methods associated with rural Mongolia is not viable for the emerging equestrian leisure industry. A practical strategy is needed with regards to the development of equine welfare in China to support this expanding industry.

Equine welfare needs development in order to keep up with the growing equine industry (Thoroughbred Racing Commentary, 2014). As a result, in 2018, two of the UK's leading equine welfare charities, The Donkey Sanctuary and World Horse Welfare have formed a ground-breaking partnership with the China Horse Industry Association (CHIA) and the Chinese Veterinary Medical Association (CVMA) to improve the equine welfare in China

(World Horse Welfare, 2018). Academic work is desperately needed to keep up with all these changes.

1.2 Aim and objectives

This study was conducted in order to review and improve the welfare of imported horse in China by investigating the situation within the industry, using targeted interviews with club owners, horse trainers, stable managers, leading riders and veterinarians in various of riding clubs in China. The overall aim is to improve the evaluation or recognition of poor health and improve the welfare of imported horses in China.

The study used a mixed methods approach to including interviews to ascertain some quantitative data about the number of horses imported in selected clubs as well as a reflective approach to analyse the perception of husbandry and welfare practices: the quantitative part and the qualitative part. The former aims to evaluate the health and welfare standard of keeping horses in China through using scientific researches as reference, which will be written in the scientific way. The second part aims to evaluate welfare awareness in China using Interpretative phenomenology analysis (IPA), which will be written from the first-person perspective. In this part, the researcher's own journey of becoming reflexive will be involved to suggest how the journey has changed her and what difficulty has been encountered during the study. IPA is employed to examine the interviewees' true attitude towards equine welfare, as well as how personal experience could have cultural impacts on opinions towards those attitudes.

Equine welfare is a sensitive topic in China. An increased Westernisation in China has raised awareness of welfare, and for many the term 'welfare' would be associated with negative connotations such as animal abuse including the Bile Bear Farming or the notorious Dog Festival (Animals Asia, 2018). Therefore, phrasing questions was carefully considered to optimise openness of responses and discussion. One key advantage that the interviewer has, is that of student identity, which was considered less threatening to the interviewees compared to an 'official', thereby encouraging openness in responses. IPA was used to explore interviewees' welfare awareness. Through lived experience (Husserl, 1913/1982), reflection on the impact of cultural difference and people's attitude towards equine welfare will be explored throughout the thesis. This could be useful with regards to giving suggestions to building up a welfare system according to other countries, such as how one was influenced by the welfare concept of other countries and applied it into Chinese industry.

Chapter 2: Methodology

2.1 Questionnaire methodology and its change

At beginning of the study, I intended to use a quantitative methodological approach in the form of questionnaires to get information on imported horse health and welfare issues in China. Because China is a big country and the equine welfare study was designed to cover the whole country, questionnaire methodology can cover a lot of cities and the data analysis is quantifiable. The designed questionnaires (see appendix 1) included 4 parts: club owners, equine vets, riders and stable managers.

However, after sending out more than 100 online questionnaires to riding clubs in Beijing, Shanghai, Qingdao, Guangzhou, Nanjing and Wuhan. I waited for 3 weeks, but there was no one response at all. This is considered one of the first signs of culture difference in attitudes towards research into welfare or the cultural difference in business responding to questionnaires. I, therefore, had to change the methodology and the plan B was to go back to China to conduct interviews. The original purpose of the interview was to get the same information that I intended to get in questionnaires. The methodology change provides the advantage of being able to interpret the responses with the added dimension of being able to explain questions, as well as interpret the non-spoken communication.

The low response rate has also proved that questionnaire methodology was not a suitable way to investigate Chinese equine industry at its stage of development (Ruth, 2012). As a person who has also been involved in the Chinese equine industry before, I agree that Chinese equine industry is in lack of academic studies and most people involved in the industry do not value academic works. Therefore, most people would refuse to respond to the questionnaire.

Although the questionnaire methodology failed in my study, the questionnaire designing process was still beneficial because it enabled me to establish the questions that were pertinent to ask. It also provided me confidence and made me realise what I really intended to get from the interviewees. It was a 'preparation' for the interview.

2.2 Interview preparation

The disadvantage of interview methodology is that I could not cover as many cities compared to using online questionnaire due to the time and budget limitation (Hamza, 2014). Therefore, choosing the representative cities was crucial. During this study: 4 representative cities (see FIGURE 1) were chosen in China including Beijing where the industry is the most advanced in China, Qingdao where using horses for farming was popular in the past, Wuhan where horses were not popular in the past partly due to the climate, however, has built one of the largest race yards across China during recent years, Inner Mongolian is the well-known horse area in China where people's livelihoods are dependent on horses and horses are an integral part of their daily lives.



FIGURE 1 SAMPLING MAP - THE RED DOTS REPRESENT SAMPLE CITIES (GEOLOGY.COM, 2019)

In the end, 5 riding clubs in Beijing were contacted through my alumni who worked in a riding club in Beijing and another friend who worked for Chinese Horse Industry Association. The clubs in Wuhan, Qingdao and Inner Mongolia were contacted through Wuhan Business University, Qingdao Agricultural University and Laide Equestrian School.

Before the interview, an extensive review of equine background literature was conducted including studies on stereotypic behaviours, gastric ulceration and welfare codes. It helped me to build up confidence and enable me to generate related questions. Interviews were recorded with smartphone (HUAWEI P9) and digital voice recorder. Occasional notes and printed pictures such as horses of different body condition scores were used as prompts for the interview process. Most interviews were conducted in Chinese (except the interview with a Portuguese trainer) and then translated into English. The transcripts were checked and reviewed for correction (see Appendix 3 as an example).

All interviews were arranged by telephone or messages and face to face interviews were conducted on-site at the various clubs. The purpose of the research was explained to the interviewees before each interview. Information related to stable managing, horse training, veterinary condition and importation situation of each club was collected. All interviews were conducted independently and the content was recorded with the agreement of interviewees. Anonymity was assured.

2.3 Interview construction

To enable the collection of data, one-to-one interviews were conducted. The interviews were conducted inside the clubs and the context was given close attention. Most of the interviewees were not my acquaintances before the interviews. The time to introduce the research and personal introduction were kept to a minimum to optimise time for data collection and to accommodate the interviewees' time schedules. In most cases, one or two

sentences about the research were given before the interview. And those introductions were focus on evaluating the health condition of imported horses. Due to the sensitivity around the term 'welfare', emphasis of the research introduction was mainly about assessing the health condition of horses. I travelled to all the included clubs to conduct interviews and short tours of stables were given by most interviewees.

The interviews were split into two parts: a structured interview and semi-structured interview (Silvia, 2011). The first part was conducted to collect the general information of each club such as how many horses and how many stables they have. The aim is to gain an insight into the background information of each club in order to make reflections. Data was organised by using tables. The second part was semi-structured with the aim of investigating the problems within the industry and gathering peoples' opinions on equine welfare perception and what improvements need to be made.

2.4 Follow-up information collection

After the interviews were finished, certain follow-up collection was conducted. Additional information raised during the interviews was collected such as the nutritional analysis report for forage.

2.5 Interpretative phenomenology analysis (IPA)

I found that the responses to my questions was closely related to their ethical thinking and was influenced by their level of equine experience. When asking a certain question, I could feel that some interviewees were more straight-forward, others, however, were less willing to answer. Then I realised that I could analysis both their answers and their attitudes towards the questions. Because their attitudes towards the questions can reflect their welfare awareness. To do that, interpretative phenomenology analysis (IPA) will be used.

Interpretative phenomenology analysis (IPA) facilities are the revealing of each case study consistent with the epistemology position of the research questions (Farquhar 2012). The purpose of using this method was to explore people's attitude towards equine welfare. the methodology approach adopted allowed a direct investigation to be conducted, without preconception of casual theory. Equine welfare is a whole new concept in the Chinese equine industry. It became unique because of the cultural difference between East and West. China has domesticated horses for centuries and has already developed its unique equine managemental practice. The westernisation, however, has resulted in an invasion of western equine managemental practice. The mixture of two managemental concepts makes Chinese equine industry unique. IPA provides the flexibility to explore that truthful welfare understandings and problems and allows a sensitivity to the context and data.

The methodology will use my own lived experience (Husserl, 1913/1982). I am a traditional Chinese student who has been studying in China for 22 years. And at my finally year of college, I started my oversea equine journey and have worked or studied with horses in the US, Japan and UK. I've personally experienced the equine welfare awareness in those countries from a day-to-day basis which has been very influential in how I now perceive horses' wellbeing. During this process, I think my concept of equine welfare keeps evolving and adapting as I am gaining more experience and learning from others. And I hope the same could happen with the equine welfare in China. This research provides me with a

platform of using those experiences as a methodology to analysis the welfare system in China. By doing that, I'm able to stand between the Eastern and Western cultures to evaluate the Chinese welfare awareness in China.

2.6 Transcript analysis

The transcription analysis is using thematic analysis (Braun and Clarke, 2006). Thematic analysis is a useful and flexible method for qualitative research in and beyond psychology. It is in relation to other qualitative analytic method that search for themes or patterns. There are 6 steps in its analysis process and the research is following that.

2.6.1 Familiarised with data and generate codes

Transcripts were read multiple times to enable familiarisation of the data. Data segments that were relevant to welfare or captured interesting equine opinions were coded. During this process, IPA was used. The lived experience was applied and reflection was made in each section.

A further analysis was conducted on the data segment that raised interesting opinions. A line-by-line conductive analysis was used. This involved a record of voice tone, speech fluidity and linguistic description. This also included writing down the feeling I got from the interviewee's words, my justification of the meaning behind their words and why I justified that way (Farquhar 2012).

2.6.2 Search, review and define themes

A theme is a pattern that captured something significant or interesting about the data or research questions (Braun and Clarke, 2008). As for my study, the themes were partly adapted from the questionnaire designed for the former methodology. The questionnaire was divided into sections which suggested the areas that should be focused on. The IPA was used to generate, review and define new themes such as the different answers the interviewees gave to certain questions. The new themes would be authentic answers and inauthentic answers based on the reflection. This highlighted the flexibility interviews have over questionnaires.

2.7 Write-up

The writing includes two parts: tabulation analysis and IPA writing. The first part was conducted in order to give a general background of each club including information of annual horse importation, stable management, training plan, club information and so on. The results would be showed through tabulations.

The second part would be the IPA writing. By the examination of how others or myself make sense of major life experiences which were provided by IPA, and the exploration of cultural barriers in order to evaluate and improve Chinese equine welfare. All interviews' responses will be appraised and interpreted in order to construct themes and identify recommendations based on the analysis. This process also includes reviewing the scientific literature and equine welfare codes of other countries.

Chapter 3: Lived experience

Interpretative phenomenology analysis (IPA) will use my own lived experience as methodology (Husserl, 1913/1982) which includes my journey of developing equine welfare awareness.

When I was a child, like most children, I liked animals and had always been wanting to get a dog or cat. Pet ownership was getting popular in big cities such as Beijing and Shanghai then, however, horse ownership was not a concept like in other countries. Having grown up in the cities, I've never lived in the countryside in China or spent time with horses. I remember the first time I found horses special was through a film called 'Dances with Wolves'. I was amazed by how the British captain interacted with his horses clearly showing a strong bond between men and horse that was on a par with human friendship. Subsequently my sister and I got support from my family to learn horseback riding in Beijing which was my first opportunity to have close encounters with horses. However, in most riding clubs in China, you can do nothing more than riding, as you are perceived to be a customer, the riding teachers would groom, wash and tack a horse for you as part of their job role. I remembered that we rode there for more than a year without knowing how to tack up a horse. There was no opportunity to get close to the horse and build a bond. The club was conscious of the Health and Safety of riding and being around horses and therefore, they didn't want to take the risk of allowing me around the horses. Therefore, back then, the relationship between human and horses was very vague for me.

The concept of equine welfare first came to me when I was at the veterinary college in China. Back then, I joined a class trip to visit a riding club with a professor from New Zealand. On the day of visit, a mare in the club had just had a foal, but unfortunately, the foal got kicked by the mare and had a big wound at the coup. The staff at the club wanted to show the professor the wound and they tried to take the foal away from the mare by force. The foal was screaming and kicking before the professor stopped it. She then suggested to keep the foal and mare close with a fence in between. The foal stopped screaming and the wound got checked. She later suggested that the wound might need antibiotics according to the size because there were specific welfare rules behind that which however, does not apply to China. For example, in UK, there are National Equine Welfare Council (NEWC) which was supported by government. The code of practice covers the specific guidance of equine welfare. And DEFRA has specific equine welfare guidelines as well. Royal Society Protection of Cruelty to Animals (RSPCA) is another charity organization that covers all kinds of animals. Besides that, the emotional bond was another surprise to me. The professor was able to see how the foal did not want to leave the mare and stepped out to stop it. The equine welfare is not only the facilities or the rules, but also the emotional attachment to the horse that was evident in this experience. She could get sad and angry seeing horses suffering. This small incidence has expanded my understanding of welfare. And it also showed how different the east and west were with equine welfare. In this instance, the professor of New Zealand and the staff from the club were both trying to do the best for the horses. The difference was that the professor from New Zealand saw the horses as animals who had the strong bonds (i.e. between mare and foal, and trust of the mare and the vet), however the staff at the club treated horses as animals who have great value and were supposed to be controlled by humans. As for myself at that time, I was thinking the same as the staff at the

club although I knew deep down that what the professor did was more humanized. I could not understand the point of doing that because the results would look the same no matter which way you chose. There seemed to be something screaming at me to think for myself instead of caring things that did not seem to matter. In other words, I tried to push myself into thinking 'you've had enough problems to deal with now, why worrying about what horses are feeling'. Years later, I realise how stupid and cruel I was back then because those were all excuses for my compromise and laziness. And I think most people like me were thinking the same way back then.

In the final year of my college, I went to US for an exchange study program. The Equine Science study there got me a chance to see the equine industry in Kentucky. I learned riding there as well which gave me opportunity to work closely with horses. This experience deeply surprised me by the close relationship between horses and students in US. Because at that time, most of the students in my class were local and they had been with horses for as long as they could remember. They would gather together talking about horses for hours and truly treated horses with the sort of respect you would expect between friends. The same thing happened with the teachers there too. For example, I could still vividly remember my riding teacher greeting both me and my horses in the same manner during the tack check at the beginning of the riding classes. Details like that showed how equally they would treat horses. This emotional attachment between horses and human grows naturally for them and this bond made them treat horses equally. And imagine it is the same with the New Zealand professor. It's not only because horse plays an implacable part in their life from a very young age, but also because the welfare awareness pushed them into thinking that way. It is very different between China and the West. However, this kind of difference does not only happen in China. Other countries could face the same problem.

After finishing my study in the US, I headed to Japan to work for an American horse trainer who specialised in Reining. From my experience, it was evident that the Japanese equine industry has more influence from the western countries than China. The club I worked in located in an area surrounded by Japanese culture and was very different from the big racing yards which were mostly equipped with western facilities and techniques. The horse trainer, however, was a very professional American trainer. During my time of working there, a mare was suffering from colic and they invited a local vet to check the horses because we did not have a vet in the club. The vet prescribed some medicine for the sick horses and even suggested to put a blanket on the horse because he saw the horse was sweating a lot. The trainer was speechless for the ignorance of the vet and used his experience to assist the horse. The horse died in the end because although the trainer knew the way of treating it, he did not have the equipment or skills to do so. This situation was shocking as it is known that the equestrian industry in Japan is more advance than in China. However, there appear to be extremes, for example, racing industry is well-supported in international level with more professional vets, whereas the example showed that the trainer had a better understanding of the situation compared to the vet. This is an example of how horses could suffer due to bad veterinary skills.

This experience also helped me to realise that equine welfare is not based on anthropomorphic attitudes towards horses, but more of an in-depth understanding of their health and behavioural needs. For example, there was a horse aged 29 with an acutely

swollen leg in the club. At that time, I felt empathetic towards the horses and felt reluctant to ask for canter, particularly as it was difficult to get him to do so. Later I was corrected by the trainer who told me his swollen leg was a regular consequence of age and predisposition to the symptom which exercise helps reduce. Therefore, to improve the welfare of horses, being anthropomorphic with horses or growing attachment alone is not the right way. In-depth understanding of equine husbandry should be gained through practise.

Through my overseas' experience, the cultural differences in the interpretation of the term 'welfare' was recognised by me. As it's been suggested in a study conducted in 2015 reviewing equine disease events resulting from international horse movement, if the international horse movement is not appropriately regulated and supervised by competent veterinary authorities and respective equine industry partners, could potentially lead to increased global spread of infectious equine disease. Therefore, the welfare of China is no longer just one country alone. With the horse movement becoming more frequent, it is a global problem of equine industry.

As a Chinese student, my understanding of welfare changed as I'm gaining more international experience. In China, I perceived welfare to be emotional and anthropomorphic, whereas now, I understand the importance of a broader, more in-depth knowledge to be able to judge good or poor welfare based on the health and behavioural signs of horses. During my time in UK, I joined a racehorse retraining and rehabilitation course held by an equine charity called Greatwood aiming to rehome former racehorses. At the same time, the charity would also use former racehorses to educate disadvantaged children and young adults with Special Educational Needs. Horses at Greatwood are perceived to be a two-way benefit that not only horses get husbandry care from humans, but also human, especially children, get help from horses. This equine-assisted therapy was proven to be successful through a study in 2007 which suggested that equine therapy can lead to reductions in psychological distress and enhancements in psychological wellbeing (Klontz et al, 2007). Another study conducted in 2015 assessing Equine-Assisted Psychotherapy for Adolescents experience depression and anxiety and the result suggested that this therapy brought a range of improvement including increase in confidence, self-esteem and assertiveness, as well as a decrease in undesirable behaviours (Wilson et.al, 2017). The emotional bond that they perceive is strong and even extreme because of that. One of the teenager participants on the course suggested that she had always put horses before herself even if there was the possibility of injury. This attitude was backed up with the well-developed welfare system for the staff who worked in the equine industry. For example, National Association of Racing Staff was formed to ensure the wellbeing of them by providing support for injury or unpleasant working experience. This welfare 'net' provides strong support for the emotional bond between horses and human. However, this is not applicable to China because of the underdevelopment of the industry generally and the bond I have with horses is different from the westerners. I tend to perceive this as a cultural difference based on different experience. I realised my veterinary training is too academic without the training of 'hands-on' and I began to understand how my attitude and movements around horses influences their behaviours as well as influencing the well-being of the handlers. As my understanding of equine welfare grows, the priority I perceive with Chinese equine welfare industry is to improve the general understanding of the animal

instead of growing anthropomorphic attitudes or in other words, false emotional bond with horses. By doing that the equine welfare could be improved practically.

Overall, the understanding of equine welfare keeps changing for me and I hope the same could happen with other people who worked in Chinese equine industry. This research is conducted to rise welfare awareness in China.

Chapter 4: Analysis

4.1 The importation condition

4.1.1 Means of import:

The horse importation of riding clubs in China relies mostly on the importing agency. There are two agencies in Beijing at the moment and most clubs are importing horses through them. Because 'the circle is very small' as the interviewee of club B described, people within the industry naturally know the importers and do not need to look for one especially. Or they can simply use recommendations from others within the industry. In this situation, the agency would take care of the quarantine and all the formal procedures. They could buy horses from the foreign company according to the requirements offered by the Chinese buyer.

Apart from the importing agency, there are clubs where the owners would go abroad to pick horses themselves. In these cases, the club owner would build a relationship with the horse owners in other countries so that they could do horse importing business. As one interviewee of club C described: 'we have translators who know a little about horses overseas to introduce us the horse trainers. We talked with the trainer to decide which one to choose. If the talk went smoothly, a relationship could be built based on that. We can still communicate even though we do not speak the same language. It's all the basic stuff, really.' For this importation method, the club owner has more to think about and there can be conflict between horse owners and horse trainers because most horse owners in China do not know much about horses. When they are accompanied with trainers to buy horses, the requirements they suggested were mostly unachievable as the interviewee of club C described: 'they (horse owners of China) want to buy horses with good appearance, great ability and are cheap. But if they (the foreign clubs they are importing from) have this kind of perfect horses, why don't they just keep it themselves.' It can be a stressful process too as the interviewee mentioned: 'there are buyers from all over the world come there to buy horses. You need to be decisive.' Based on this fact, the interviewee admitted that 'the horse industry of China is not as good as lots of countries. We still got a lot to learn on that part.' This suggestion indicates the lack of understanding of the horse importation among some Chinese importer and there has not been a proper agency for them to turn to.

Besides the two importing methods mentioned above, the third importing method is that the club has a connection with the foreign government who has built up projects to assist horse importation. For example, an interviewee of Club A which mainly focuses on French ponies described 'we are the first French pony club in China and we have our official connection with French pony association. There are people working there who can represent us. We built a company in France too. They select ponies with the guidance and supervision of the state government. As a matter of fact, during our first importation, we got support from French organization and government officially. Because we are the very first group that import ponies from France and we are the first official French pony club in China too. Before us, most of the clubs use local horses or hybrids to do riding lessons.' In this condition, the importation is more formal compared to others and the price of the horses is more fixed as the interviewee described: 'before our importation, the government and organization have clear instructions of the cost of A, B, C, D level horses. The price may differ with the

difference of the ability of horses. But based on the instruction for the price, there is not much we can do to negotiate.' By doing that, the possibility of conflict can be reduced. But this method is not common in China and very few clubs are doing that.

4.1.2 Difference in horse selecting:

One thing that is agreed to be very important to consider during importation is the need of the club for most riding clubs. The importing number mainly depends the membership size and the facilities of the club. They also suggested that the importing number is not affected by the government policy and it is still mainly influenced by the clubs themselves. Besides that, the horse selection preference differs with club and it largely depends on the club owner's knowledge of horses. During my interview, I found 3 representative club with the club of different levels of equine knowledge. The functions of these clubs are the same and they all focus on the jumping.

The first club is club A. The club owner is a businessman and he specialised in marketing instead of horses. He has never learned riding before. For this club, the owner suggested that apart from considering the need of the club, 'the transportation and quarantine are the next thing to be considered' 'The warm blood and ponies are different when it comes to the size of the box. The time need to be considered too. It cost less if the time is short. 9 ponies took up 2 boxes. For warm blood, 3 horses are for 1 box. Therefore, we import no less than 3 horses each time. Ponies are cheaper than warm blood'. This club has imported 9 horses this year and imported the 40 horses the during first importation. The reason is that 'the 40 importation of the very first time is due to the calculation we made based on the size of arena, number of stables, rider's number and expected membership size. These are calculated when we built the club. These turned out to be considerably precise and scientific at that time. Because we did a lot of statistical work'. When the owner selects horses, 'height' is the first thing he consider. 'French pony is divided in to A (80-107), B (108-130), C (131-139), D (140-149) groups. We consider the height together with Kids' age. Because what I studied in college is marketing and from that point of view, I consider the kid's age and average height. We know that kids aged 9 plus have more study pressure. Kids at that age need to learn more things. At the same time. in other countries, the youngest kids can start riding from 3-4 years old. Therefore, we focused group are kids aged 4-12. With that focused age kids' averaged height, we decide how much A, B, C, D groups ponies we need to buy. That's how we decide the number in the first place.' The second thing he considers is the appearance because he wants to attract more customers who are mostly children. Horses need to be good-looking and 'cute' as he described. And he described the French company found it weird and did not understand that. Because this was a business strategy. The third thing he considers is the health condition and ability of horses. Geldings and mares are preferred during importation of their stead tempers.

The second type club is club B. The owner is an amateur rider who has 5-6 years of riding experience. However, he is not considered a professional rider in China and does not give riding lessons. When he was asked about what to consider when selecting horses, he replied: 'to start with, we consider the condition and personality of horses. They need to have steady temper. And then the appearance and ability. The rest such as gender, height is not very important to me.'

The third club is club C. The club owner is a horse trainer as well as a professional rider. He has won in many competitions in China before and is a very experienced rider. He has had riding training in Europe before which includes Belgium and Netherlands. When asked about what factor he would consider when selecting horses, he replied: 'to begin with, the horse's training needs to be good. You (foreign companies) cannot sell me some badly trained horses that you cannot ride yourself. We need to try the horse in our own way. If we cannot ride it, we won't buy it. I need to get horses that most people can ride. The personality of horse is more important than the appearance. We don't just look at a horse after they are back. The goal of our importation needs to be clear. You want to use the horse to improve your riding skills and help all the riders to get better. You don't just buy horses for fun.'

In general, club owners tend to form their own horse selecting standards based on the equine knowledge they have. In club A, although the owner not specialised in horses, he would do a lot of preparational works such as investigating the pony classifications. And he was able to tell me the specific heights of A, B, C, D level ponies and their ranges without hesitation. For this club, the business structure was well-organised and all the decisions he made were based on calculations or investigations such as the selection of horses' height was based on the average height of the children of certain ages in China. The appearance was considered more important than other clubs. And the psychology of the customer was thought thoroughly too (selecting 'cute' horses in order to attract young riders). The owner of club B thought the condition and personality of horses were the most important things to consider. Because he was a rider and horses' temper and physical conditions were more important to a rider. The appearance, however, was less important. He did not speak as much as the first club owner which showed that he had done less work or investigations. The same thing is applicable to the club C's owner who is a professional rider and a horse trainer. He thought that the training of horses was the first thing to consider when selecting horses and he had his own way of testing horses too. Horses needed to be well-trained and had good personality. Because he trained horses himself and was fully aware of the importance of training. In his opinion, he was importing not just horses, but also the good training samples that he could follow and imitate.

In my perspective, a combination of both equine related knowledge and unrelated knowledge is needed for the industry. Instead of 'trying to kill each other (between clubs)' as the interviewee of club C suggested, they need to learn from each other. Combining their knowledge together could really make a difference for the industry. Certain importing organisations can be developed in China to help the club owners to import horses. For example, In UK, many horses are imported through horse dealers. There is no record of the number of these in the UK, as the definition of a dealer is someone who buys and sells horses as their business and therefore there are numerous dealers advertising throughout the UK and Ireland. They rely on their experience and equine knowledge for their success. They are also responsible for giving suggestions to buyers and guiding them to select the most appropriate horses.

4.1.3 Gender preference:

For most riding clubs, geldings and mares are the most preferable. Because most clubs focus on membership and riding lessons. The riders are usually beginners. The personalities

of geldings and mares are steadier compared to stallions. However, club I is an exception. The club was newly opened in Wuhan's rural area and was surrounded by touristy spots. They planned to focus on membership riding and touristy experience riding. The event the club focused on was classical dressage and they had 15 Lipizzaner and Arabian stallions. When asked about why they make this decision, the manager replied: 'because if the horse is good, we can manage to breed them with local mares to pass on the good genes. The pedigree of these horses is very good'.

Firstly, this club was aiming to make money through tourist riding and memberships. Choosing classical dressage required highly professional skills and did not seem to be a good idea for this purpose. By touring the club, I found that the club was under construction and did not have the training facilities needed for classical dressage. Therefore, I assumed that they must have very professional horse trainer. However, to my surprise, there were only two CHIA certified riders in the club and none of them had any experience in training classical dressage horses. The manager was not very experienced neither and had only few months of internship in Beijing. Her ability of operating a stub farm is doubtful. Besides that, idea of importing 15 stallions for membership riding is not very reasonable because of their temper. When asked the manager why they built the club in the first place, she answered: 'because the sponsor of the club likes horses a lot. He would like to put money into horses. Besides, there is not a lot of riding clubs in Wuhan. He thinks it would be a great opportunity to start a business.'

Before this interview, I was aware that the equine industry in Wuhan was less developed than cities such as Beijing because of its climate which is unsuitable for keeping horses. But the management level of this club is still shocking to me with unexperienced manager in charge of 15 classical dressage stallions used for membership and tourists riding. The club owner did not have enough understanding of the horse ownership responsibility and focused too much on the business and making money. The horse breed was considered a part of the reputation of the club. And they did not care too much about how to keep these horses. They chose stallions to import because the semen can be sold for breeding. The cost tended to be lower than breeding mares. They operated the club riding horses as merchandise which must be taken full advantage of in order to make more profit for the club.

This interview showed the biggest problem of the industry development in China: the industry is too business-oriented. Most people get in to the industry with the purpose of making money. The purpose is too strong and therefore, the real equine skills have always been neglected by the people who are at the management level. This club is a very typical example. The unusual gender choice and horse breed choice were all made business-oriented.

4.1.4 Isolation:

In general, most riding clubs I interviewed do not isolate horse themselves after they are imported. 'they (imported horses) have already been isolated for a month before they get to the club. We will let the agency to check the horses after they arrive at the club. We don't isolate them after all that' as the interviewee at club C suggested.

During the isolation in China, 'horses are isolated in the isolation strip and we have someone over there to look after the horses. And the workers at the strip are in charge of the feeding and training of horses. We only send out our stuff there once 2 days to check on the horses. We can exercise and training horses during visit' club B suggested. And most clubs do not have their own isolation boxes with only one exception with the race yard in Mongolian (R1) as identified during my interview. The vet there suggested that: 'after horses are isolated in New Zealand for a month, they are transferred into China. Horses are required to be isolated for another month by the government in China. We have our own isolation box to do that'.

With regards to the isolation box, some issues were raised in the description by the vet of club D which is a small but advanced riding club in Beijing. The vet of the club suggested: 'the use of isolation boxes in China is very informal and is not of much use. The isolation box is supposed to be like if you put horses inside, they are not allowed to get in touch with the outside. But the isolation box in China is not very standardised. The horses there are not totally isolated from the outside world. But with more and more horses imported each year, we may do better on the isolation in the future. Take sterilize as an example, lots of places do not actually do it. They just ask for the money. even though it only takes few seconds to do. This is very unprofessional.' The isolation code of UK suggested that the isolation facility should be a separate, enclosed building of sound, permanent construction, capable of being cleansed and disinfected effectively. Other horses cannot approach 100 metres of the isolation facility while it is in use (HBLB, 2019). And the study of equine disease event resulting from international horse movement also suggested that subclinical infections are a challenge for international trade: 88% of the regulated movements that resulted in introductions involved infected horses that showed no clinical signs at the time of import. Therefore, isolation is crucial when importing horses (Dominguez et al, 2016). According to the interviewee's description, the isolation work is not being done properly in China.

As for the horse husbandry and management of the isolation box, the horse trainer at club F suggested:

'Horses need to be isolated both in China and in the importing countries. The isolation box is not a place for horses. It is like a prison for human. Horses are okay and fat before they enter the box. They will be dehydrated in the plane because they stop drinking when they are under stress. It is highly possible that the horses don't drink on the first day of transporting because of the change of environment. They may drink a little the second day because they are thirsty. The older horses may be a little bit better. The loading and unloading of horses also take a lot of time as well. horses have a high energy consumption during this period. After they enter the isolation box, there is not a training arena for them. Horses need to be trained every day. They do not have the proper equipment for horse training there neither. No one can take the responsibility for the injury of any horses because it is risky to do so.'

According to the isolation code in UK, an adequate supply of food and bedding material for the whole of the isolation period must be made available and stored within before isolation commences (HBLB, 2019). The interviewee's description was not against the isolation rules

and this reflected the poor isolation box condition in China. This is partly due to the fast-growing industry in China. The number of horses imported into China is increasing dramatically during recent years. The number of riding club in China has increased to 1452 by the end of 2017, with 68% average annual growth rate for club membership. More than 20,416 horses were purchased by Chinese horse clubs in 2017, 63% of which were imported (CHF, 2018). The fast-paced development in the horse importing industry has resulted in facility problems such as the lack of standard isolation boxes. The management of the isolation box is poor because the number of imported horses increased too quickly without enough effort putting into the horse keeping facilities. The veterinary standards and the level of equine husbandry need to be optimised to suit the quality of horses that are imported. Poor husbandry cannot assist horses to perform well. Most interviewees that I encountered tended to talk how good their horses were and how much they had spent on them. However, the husbandry of horses was rarely mentioned. Therefore, more effort should be put into the development of husbandry to support the selection of good horses in the future.

4.2 Feeding and stable design

4.2.1 Feed and forage

The forage analysis (Table 2-2) report only covers a few nutrients and it is far from adequate. Accurate nutrient determination requires a lab with standard nutrition analysis including dry matter, digestible energy, relative feed value, acid detergent, fibre neutral detergent fibre, non-soluble carbohydrates, crude protein, crude fat and minerals. For example, the forage analysis provided by Dodson & Horrell horse feed specialist in UK can provide proper nutrition analysis which includes Dry Matter, Crude Protein, Ash, Sugar, Neutral Detergent Fibre, Digestible Energy (pH for Haylage only). The Basic mineral analysis can test Calcium, Copper, Iron, Magnesium, Manganese, Phosphorous, Potassium, Sodium and Zinc (Dodson and Horrell, 2019). The lab analysis club D provided is therefore, limited. The general understanding and expertise people have is limited, therefore, the interpretation of the analysis report is poor.

The advantage of feeding concentrate feed or complete feed is agreed to be convenient and it became most clubs' feeding choice. 'But the nutrition of it (concentrate feed) may not be as good as the mixed feed' as one of the interviewees suggested. At the same time, it can cost more than mixed feed. Therefore, clubs like club G feed local horses mixed feed in order to save cost. Besides that, the horse feed in China has a long journey of development too. One of the race yard manager suggested: 'things (horse feeding) were different in the past. Back then, we cannot import feed from other countries. There is no other feed for horses beside mixed feed which was made by us according to their (importing countries) recipe. We have people who specialized in this to help us. They proposed the basic recipe and we added some Chinese special nutrition alongside as well'. Things changed with the importation of Red Mill which was the only foreign feed can be officially imported into China. The manager added: 'we started to be able to import in 2009. I used to think it was impossible to achieve because of the strict border check. Feed was not allowed for sure. But he (the boss of Red Mill company) managed to achieve that in the end. That got the permission from the Ministry of Agriculture. I have no idea how they did it. But the result of

it is good'. After that, 'Sun, who is the very first Chinese student of Darley company, started the Red Rum feed company (the most widely-use local feed for racehorses in China)'. And then, Red Rum is the most popular local horse feed in China.

The code of practice for equine welfare in UK suggested that horses should be fed an appropriate diet that reflects their needs and consideration should be given to the age, type, weight, condition, health and level of work of the individual (DEFRA, 2013).



FIGURE 2: THE FEEDING ROOM OF R2 (AUTHOR'S OWN IMAGE, 2018)



FIGURE 3: THE FEED OF R2 (AUTHOR'S OWN IMAGE, 2018)

Traditionally, performance horses are often fed high quantities of cereal grain-containing feeds to sustain their high-energy needs and the forage portion, however, is reduced. This feeding practice has been suggesting adverse health effect. Clubs such as club B suggested to feed their performance horses grain. The literature suggested that high-energy fibrous feeds in performance horse diets does not appear to adversely affect glycogen utilization or muscle lactate clearance during intense exercise and an alkalizing effect of a haylage-only diet may offset acidosis induced by intense exercise. The literature currently supports the replacement of a small portion the grain fraction of the daily ration with high energy fibrous feed production. This is likely to improve the welfare of those horses as suggested (Ralston, 1993).

Chinese wildrye is the most popular forage choice (Table 2-1) across the industry in China. As the horse trainer in club A explained: 'alfalfa is another good choice but can be too pricey. We still need to consider the costing when it comes to feed. Alfalfa is good but cannot feed too much. It will make horses 'hot'. But Chinese wild rye won't, which is good' he added: 'with the development of club economy, we need to be more efficient'. However, despite the advantage mentioned above with local hay, there still is club sticking with imported hay such as club D. The vet suggested: 'We tried local hay before. But the quality is not good. Local hay is cheaper but not very good'. However, imported hay has disadvantages too. The vet added: 'the hay that we imported can be different each time. Therefore, we will send the hay to go through nutritious check each time'. 'Some (digestive) problems come from hay because it can go mouldy. That's one of the reasons that we test the hay from time to time' the vet added: 'it's also because we need to be aware of how much nutritious they are able to digest. So that we could make feeding plans according to that'. 'One of the most important nutritious needs to be check is the fibre. Most people

think the higher the fibre, the better. But in fact, it's not. We give feedback to the company about the quality and effect of feeding the feed. Because the feed quality has a very direct relationship with the body condition of horses. Better feed would make a more health horses with better movement' according to the vet.

The forages are classified as legumes or grass. The nutrients in the forage vary greatly with maturity of the grass, fertilization, management and environmental conditions. In order to determine the nutrient content in forage it is best to take samples and get them analysed by a forage testing lab. Legumes are usually higher in protein, calcium, and energy than grasses. They have more leaves than grasses and require optimal growth conditions (warm weather and good soil) to produce the best nutrients. Some legumes include clover and alfalfa. Some commonly used grasses include orchard grass, timothy, bluegrass, and fescue. Hay is forage that has been harvested, dried, and baled before feeding to horses. Legume hay can contain 2 to 3 times more protein and calcium than grass hay. Common grass hays include timothy, brome and orchard grass. They have fine stems, seed heads and longer leaves than legumes. They are most nutritious when cut earlier in their growth stage. Maturity at harvest is key to quality. Second cut grass hays average 16 to 20% protein (Ralston, 1993). Therefore, the forage quality needs to be tested.

As it was suggested in UK equine welfare recommendation, the access to forage should be almost constant when horses do not exercise, especially for stabled horses. Physical or psychological health problems could occur if horses aren't fed enough fibre. And all the conserved forage should be of good quality which means it should be clean, smell fresh and be visibly free from mould and dust (DEFRA, 2013). This is hard to achieve with local hay in China as club D suggested. The quality of the hay was not good and therefore, imported hay was used.

The feeding plans for imported horses and local horses are different for most clubs (Table 2-1). The manager of one of the race yards suggested: 'for the local horses here, we don't want them to be fed too well'. He thought very differently towards imported horses and local horses by suggesting: 'with race horses, only good feeding can provide them with enough energy to run fast. But with the local horses used for membership riding, too much feed will excite them. We don't want them to be too energetic to ride by membership'. Therefore, they feed local horses with the feed they bought from the local market. Some clubs change the feeding plan according to the exercise plan of horses. When asked if there is any difference of feeding plans between local horses and imported horses, the vet at club G replied: 'there is supposed to be no difference. We only change the feed into Red Rum when they are going to compete. But with the local horses, we don't feed Red Rum, only mixed feed'.

When it comes to whether to feed first or give hay first, the rider at club F suggested: 'I think as long as there is a regular habit, it doesn't matter if you give hay first or feed first. There is no right and wrong. I think the habit is more important. You need to stick to it. You cannot do this today and do differently tomorrow'. The similar statement was suggested by the rider at one of the race yards too: 'it doesn't matter how many times you feed daily. It's more important to fix the feeding time and amount of feeding'. When asked about how often they feed horses, the vet at race yard 2 mentioned that after hearing lots of related

opinions, they decide to feed horses twice a day. 'I think horses need to time to rest just like human. If you feed too often, the digestive system will need to keep working all the time' he added: 'feeding twice a day allow horses to empty their stomach which will take about 6-8 hours. If you feed too often, they won't have time to rest their stomach which could causes digestive issues'. He is against the idea of feeding too many times a day. 'I just simply think the digestive system should not be working all the time. It would become a mission for horse to digest which is no good for their health' he said.

The feeding plan R2 suggested is to feed twice a day in order to reduce possible digestive issue. However, it is not the same with the literature suggested. The UK equine welfare code suggested that if a daily concentrate ration is required, it should be spread over at least two meals a day which means that feeding twice a day should be a minimum frequency. A latest study was conducted in order to evaluate the traditional grain feeding (twice a day) and factional feeding (automated feeder delivers grains in 20 qual aliquots). The results showed that proportion of horses with gastral disease were significantly lower with the second feed routine. The study support that fasting period is a strong contributing factor for gastral disease formation (Bass et al, 2018). Therefore, the frequency of feeding should be higher in order to avoid gastral diseases.

4.2.2 Stable design

The UK equine welfare code suggested that adequate and suitable bedding material is necessary in all equine accommodation to provide warmth and, protection against injury and to enable the horse to lie down in comfort. The bedding material should be non-toxic, free of mould and excessive dust, and either allow effective drainage or be absorbent enough to maintain a dry bed and assist in keeping the air fresh. The most popular bedding in China is rice shell (Table 3). Most club are aware that shaving may be a better choice, however, only few clubs have excess to shaving. And at the same time, it is expensive to buy shaving. The rice production in China is very high and therefore, the rice shell is easy to get. Most clubs take advantages of that and use it for bedding. Other bedding such as crushed wood pellets bedding is used by club H and the manager explained that because cork is better at absorbing the heat and therefore, is used in winter. The vet at race yard 2 mentioned that when he was working in Beijing, they tried using straw for bedding, however, they abandoned it because the stable was too hard to clean up and horses tended to eat it.

As most interviewees suggested, straw is unpopular in China because it is hard to clean (Table 3). However straw bedding is more advantageous compared to other bedding types for the welfare of horses. To start with, bedding is very important to the health of horses and one of the reasons is that the airborne particulate matter released from stalls' bedding are inhaled by the horses and can be factor in their health and racing performance. A study conducted in 2018 suggested that the use of straw resulted in the lowest concentration of airborne particulate matter compared to shavings, STREUfex, and Woody Pet (Nazarenko et al, 2018). Another study was conducted to analysis different bedding material (wheat straw, wood shavings, hemp shives, linen shives, wheat straw pellets, and paper cuttings) used for horse stables with regards to ammonia generation. The results suggested that straw pellets are most suitable for horse stables, not only to improve air quality by also, first and

foremost, in relation to ammonia binding and ammonia transformation within the bedding material, respectively. The disadvantage of this bedding is the high substrate temperature could favour the growth of pathogenic germs (Fleming et al, 2008). Although straw pellets bedding is proven to be good for horses' health by improving the air quality, straw bedding is preferred to reduce the abnormal behaviours. A study was conducted in 2010 to investigate the effects of different bedding material on the behaviour of horses housed in single stalls. The result suggested that compared with straw pellets and shaving, the application of straw bedding led to significantly higher frequency and longer duration of occupation with bedding material and in turn, shorter fraction of standing and other behaviours (Werhahn, 2011). Since occupation is one of the important functions that bedding material is supposed to fulfil., straw bedding is the best compared to shaving and straw pellets with regards to horse behaviour. Besides that, compared to peat moss with shaving and crushed wood pellets bedding, the application of straw bedding led to significant longer duration and high frequency of occupation with bedding and, in turn, shorter fraction of standing. Therefore, undesired behaviours appeared the least frequently (Kwiatkowska et al, 2016).

The stable designs other than bedding types such as horse number and whether horses could get contact with each other have influence on the abnormal behaviours of horses. A study was conducted by McGreevy and his co-workers to investigate management factors associated with stereotypic and redirected behaviour. The results suggested that the risk of horse performing abnormal behaviour increased when the total number of horses in the yard was fewer than 75 and in association with box design that minimised contact between neighbouring horses (McGreevy, 1995). The further study was done in 2007 to investigate the possible influence of neighbours on stereotypic behaviour in horses and the result suggested that exposure to a stereotypic neighbour is a significant risk factor for performing stereotypy. Also, aggressive behaviour towards other horses increased the odds of stereotypy in the aggressor (Nagy et al, 2007). Therefore, stereotypy horses' stables should not have any direct contact with normal horses' stables and the number of horses in a yard should be more than 75. These should all be considered when designing the stables.

For some clubs, the stable design for local horses tend to be different from imported horses. The interviewee at Race yard 1 suggested the reasons: 'local horses have better endurance and they are not very sensitive (compared to imported thoroughbred)'. Therefore, 'they (local horses) are roughly kept with lower standard of feeding and training'. He later gave an example: 'for local horses, we do not provide bedding. But bedding is very necessary for thoroughbred for them to relax. They could easily hurt themselves if they lay down without bedding. They have thinner skin. Local horses have thicker skin and coat, which make them less easy to get hurt in the stable'. The other reason as he suggested is that 'thoroughbreds worth more, therefore, you need to treat them more carefully'.

Unique stables design in cold climate

For race yard 2 which located in Inner Mongolian, the stable is specially made according to the interviewee. 'To start with, the stables were built with lower roof. The window of each stable is very small too, which is specially designed for the special weather of Mongolia'. 'The woods inside the stable was specially build for cold weather. Therefore, the

temperature inside the stable could maintain 5-6 degree in winter'. As for the exercise in the winter, the interviewee added: 'there is a '回' shaped design inside the stable. All the stables are shaped into a circle and you can put 70 horses inside. When the weather becomes too cold to go out, horses can be walked in-hand in a circle inside the stable to exercise'. As for the summer time, 'the stables were built on the prairie where the ventilation is good. This design keeps the temperature inside stable lower than 7-8 degrees in the summer' the interviewee mentioned: 'during the summer, the whole stable will have great ventilation and it will be cool with all the window open'.

4.3 Training plan

It has been suggested that the main objectives of general horse training are established: to improve or maintain maximum performance, prepare the horse for the competition; to delay onset of fatigue to improve skills or work capacity; to minimize the incidence of injuries or metabolic disorder; and to maintain willingness and enthusiasm for exercise (Rubioab, 2017). Rubioab also suggested in his research about horse training that there are seven principle of training including: to avoid or minimize the incidence of injuries, overcompensation, periodization, progressive loading, individuality, specific and unity. The training takes a big part in horses' welfare as well. The information collected can be seen in Table 4-1 and Table 4-2.

4.3.1 Turnout limitation:

All stabled horses, apart from those on box rest for veterinary reasons, will benefit from daily turnout in the field to allow them to graze and socialise with other horse. If turnout is not feasible, stabled horses should receive appropriate exercise daily, unless contrary to veterinary advice (DEFRA, 2013). A study was done in 2011 to investigate the temporary turnout's effect in the behaviour of competitive horses housed in single stalls. The result showed that the behaviour within the stall was more restless in the treatment without turnout – which became apparent in significantly more frequent changes between behaviours as compared with the treatments with turnout (Werhahn, 2011). Therefore, turnout is essential to the behaviours of horses and the lack of turnout leads to abnormal behaviours. Besides that, turnout could influence training as well. Werhahn's study measured the distance covered during turnout and the result showed a significantly shorter distance covered when horses were trained before they were turned out compared with turnout before training. If horses were turned out after training, they also showed less trotting and cantering and more dozing (Werhahn, 2011). Turnout is important for the horses' health too. A study was conducted to compare stabled horses' maintenance of fitness during extended period of no forced exercise. The result showed that stalled horses without exercise lost fitness, whereas pastured-turnout horses remained as fit as stalled with exercise horses. Additional, pastured-turnout horses had greater bone mineral content. Study suggested that access to pasture could help to maintain bone strength and exercise fitness ability (Patricia et al, 2013). In general, turnout is crucial because it can influence horses' behaviours and health. Therefore, it can be concluded that it is very important to provide horses with access to turnout.

The time budget should be considered during turnout. During a study conducted in 1985, 8 ponies were observed with members of a pair housed in adjacent stalls and fed ad libitum

hay. The result suggested that more time was spent feeding when visual contact was allowed than when it was not. It suggested that social facilities were important in maintaining feeding behaviours in ponies (Sweeting et al, 1985). Another study conducted in 2015 investigated the effect of forage presentation on feed intake behaviour in stabled horses and the result suggested that horses had eaten all forage by 22:30 daily irrespective of haynets used, but small nets led to greater amount of individual feeding bouts at night (Ellis et al, 2015). Another study measured the effect of enrichment items on activity and social interactions in domestic horses and the result suggested that if grass is not available in paddocks, the provision of roughage reduce the risk of aggressive interactions between horses kept in group (Jørgensen et al, 2010). It has also been suggested that the enrichment of the stable environment through provision of multiple forages may have welfare benefits for horses, in reducing straw consumption and facilitating the expression of highly motivated foraging behaviour (Goodwin et al, 2002). A further study suggested that providing the horse with sufficient foraging opportunities and enrichment should not be underestimated, as the consequences of lack of foraging opportunity can include frustration, health complications such as gastric ulceration, and the development of stereotypical behaviour, all of which can ultimately compromise welfare (Nicolls, 2018). Multiple forages could also be adapted in the stables as a study suggested that horses had the motivation to move between foraging locations regardless of the palatability of the forages offered or the horses' preference for a forage (Goodwin et al, 2007). It would be a good way to adapt the management of forage provision.

During the interviews, most club suggested that they try to turn out horses as much as they can. However, there were limitations. When asked if they turn out horses, club G suggested: 'we don't do that a lot because of the condition of our club. There is not much room to do that. We allow the horses to turn out for a few minutes after being ridden. The turn-out arenas we have are far from adequate. Most of time, we need to rely on the riding and treadmill'. The limitation of room and land is the major problem they are facing with the training of horses. However, some clubs tend not turn out horses for safety concern. When asked the same question to club D, the manager answered: 'we don't do that because it's unsafe for the horse'. 'I know it is good for horse's health and part of their welfare. But we do not have facilities to do that. Even lounging is not as relaxing as turning-out' the interviewee said: 'we do not have field to do that'. The other reason she suggested is that 'our horses have never learned to be social. If we put two horses in one field, they will fight with each other and hurt themselves'.

A study in 2011 (Werhahn et al, 2011) investigated the behaviour and activity patterns during free exercise in single stall housed competitive horses and the result showed that when turnout was allowed in groups, the horses spent more time in social interaction and less time walking and trotting than the solitary-turnout horses. Therefore, greater distance was covered in solitary-turnout horses and the besides that, the distance solitary-turnout horses covered showed a greater deviation both within and between days compared to group-turnout horses. The interviewee suggested that the horses they had had never learned to social and therefore, were solitary turned out. However, according to the study, the exercise intensity has a great deviation compared to group-turnout horses. Therefore, group turnout is preferred as a part of daily exercise plan.

Besides that, the interviewee also suggested that the land limitation effected the welfare of horses. Because most clubs owners in China try to build their clubs as close to a town centre as possible in order to attract more customer. Especially for the riding clubs, the location is crucial. I used to work as an assistant for a salesman in a riding club in Beijing and my job was to assist him to get more membership. One of the concerns raised the most by the customer was the location of the club, whether it was easy to reach. As a result, the land for constructing the clubs is often limited and expensive. Therefore, replacement for turnout such as walker becomes the first exercise option and most clubs suggested that they would keep the walker running consistently.

4.3.2 Training difficulty:

During the interview related to horse training, the major problem raised was training skills. One of the interviewees suggested that they imported without knowing how to train them which results in the decreased in the quality of perform. Small portion of clubs would hire foreign horse trainers to train imported horses and send their riders abroad to learn riding. But only few clubs have access to do that. Besides that, one of the interviewees complained: 'if we want to hire a foreign trainer to train our horses, they will only come here for a month or less and then go back. No one else know how to train horses after he's gone'. Then I suggested they could get Chinese professional riders/trainers to do that, he replied: 'all the experienced riders in China want to compete instead of teaching. This is another big problem'.

The interviewee was a bit cynical here by suggesting that the experienced riders in China cared too much about competition and did not want to pass their equine knowledge to others. This statement could be made based on his own role as a professional rider and a riding teacher, and his observation and experience. However, there could also be the possibility of him trying to boost himself and his contribution to the industry because he is on the safe zone according to his description. This contradicts the situation in more established industries where the infrastructure is there to gain vocational training qualifications. For example, the British Horse Society provides exams of riding and reaching certificates. Trainers tend to use teaching as a way to fund their competition careers.

4.3.3 Local horses' different training plans:

There was a study (Hermsworth et al, 2015) conducted in 2015 to evaluate the welfare of recreational horses and it suggested that research concerning it has focused primarily on observed welfare problems, measurable welfare indices and the rule of welfare indices in horse welfare assessment. However, very little literature identified possible relationship between owner attributes and horse welfare. This study found that the performance of horse husbandry and management practice is related to horse welfare outcomes. And the relationship between key owner attributes and horse welfare is crucial too with further investigation needed (Hermsworth et al, 2015). The local horses in China are often used as recreational horses in most riding clubs. The following interview results suggested the horse owners' attitude towards local horses' training tended to be different from imported horses used for competition.

Most of the imported horses are used for jumping competition in clubs focusing on membership riding. Therefore, their training tends to be different from local horses which are used as teaching horses. 'Their (local horses) training plan is light and frequent. Imported horses are competitive horse, their training is less frequent but with higher intensity level' as the interviewee at club B suggested. When it comes to daily training, the interviewee at club F mentioned that since they use the local horses for classes which makes them very busy throughout the weekend. They will rest horses for two days and apply mild training during weekdays. 'The customers will come on Saturday and Sunday' said the interviewee at club F, 'we need to make sure the horses are properly trained on Friday to avoid problems (in the lessons). We don't have much customers from Monday to Friday'. However, these rules are not applicable to imported horses that are used in professional team. In general, the interviewee suggested: 'the horses of professional team (imported horses) are trained harder than local horses.'

However, this tends to be different for race yard 1 that has imported thoroughbreds trained for racing. The horse trainer of the race yard suggested: 'local horses have better endurance. The training can be longer and more intensive. But for thoroughbred, the training plan need to be timed well. Injury can happen if you don't do it well'. The race yard located in Wuhan which tends to be very hot in the summer, therefore, the trainer suggested: 'you cannot train them for too long. With hot weather like this, the body temperature can rise quickly when we exercise thoroughbreds. Training for long periods can cause them to suffer sunstroke. If we don't treat them on time, they could easily die'. On the other hand, with local horses, he suggested: 'local horses are used to bad environment and they can work in this weather. They have higher tolerance than imported horses. Therefore, we can train them for longer'. He also mentioned that: 'thoroughbred is more sensitive to the heat (than local horses)'

During the interviews, the attitude the interviewers had towards imported horses and local horses had significant differences. The imported horse required more attention and were more 'sensitive' according to the interviewer. This is true considering that they are foreign breed types and require different equine husbandry which is more detailed and advanced. At the same time, they were more expensive than local horses and deserved more advanced caring according to most clubs. Although this research mainly focuses on imported horses, there were hints through the interviews that the welfare of local horses was much poorer according to the attitudes most interviewees have towards them. For example, the race yard 1 suggested that 'local horses are used to bad environment and they can work at this weather too' and this statement is not true. The major local breed the yard had was Yili horse which originated from Russian breeds crossed with Mongolian stock Don. The climate of Wuhan where the yard located was too hot this horse. Because the Yili horses were much cheaper compared to imported horses, less attention was given to their husbandry. This suggested that the welfare of local horses could be a lot worse than imported horses in China. A lot of improvement is needed.

According to a study of 1998 (Morgan, 1998) about thermoneutral zone and critical temperatures of horses, the lower critical temperature was found to be 0-5°C and below this limit, the metabolic rate must rise if deep-body temperature is to be maintained. The upper critical temperature range from 25°C to 30°C. Horse training is closely linked to the climate

change and the environment difference. Training method should be adjusted regularly by comparing the critical temperature of horses with the actual temperature of the day.

Besides that, the difference of training local horses and imported horses could also be because of the different training status of horses. For example, club I suggested: 'imported horse will be trained for longer and we will use different training skills too'. On the other hand, 'local horses are easy to train compared to imported horses' club I added. The reason behind it is because 'the local horses we bought were all mature horses. They do not need to be trained for a very long time. But the imported horses we bought are green horses and we need to put a lot of effort in with their training'. This is also applicable for club H which claimed that they did not train local horses because they were used for breeding and were kept outside all the time.

Overall, the differences of training plans between local horses and imported horses are largely due to the differences of athletic level and usage. The training of local horses tends to attract less attention than imported horses. In this case, the horse trainer of club C argued by suggesting that more attention should be put on local horse training especially for Yili horses of Xinjiang because it seems to have a great future in training aspect. 'If we want to buy Yili horses from Xinjiang, we would pick 1 out of 1000 or more. The picked horses need to be able to run, jump and have great temperament. And if we trained them well, they would be just as capable as European ponies' he suggested. However, the problem is that 'it could only happen with great knowledge and equipment, which no one in China is actually doing at the moment' as the interviewee suggested. One of the advantages Yili horses have is the height. Because there have not been many pony clubs for children in China yet. Most riding clubs would put children on adult-rider sized horses. In this case, 'they (Yili horses) are not tall and about 1.4 to 1.6 meters. They are very suitable for Asian people's height and are less dangerous for children and women' as the interviewee mentioned. However, this advantage can also be a drawback. 'They (Yili horses) are of smaller size and It's not possible for them to carry an adult and jump 1.6m' the horse trainer at club F suggested: at the same time, they (Yili horses) do not have the balance and learning ability to do that (jumping)'. However, temperament wise, they are good for riding lessons and beginners.

4.4 Analysis of Body Condition Score, fitness level and adaptation of horses after importation

Imported horses' adaptation to the new environment can be defined as the behavioural and mental efforts of horses to master the new surroundings and it's a very important part of the horses' welfare. A study was done in 2001 in order to investigate changes in fit horses undergoing acclimatisation to a hot humid environment and the result suggested that horses exposed to hot humid environmental conditions without prior acclimatisation were able to accommodate these stresses and, with appropriate management, remain fit and clinically healthy, without significant risk of heat illness or heat-related disorders (Marlin et al, 2001). The welfare code (DEFRA, 2017) requires the horses should only be transported when they are in a good state of health (unless they are travel for treatment under veterinary guidance). After they arrived, close monitoring should be applied to ensure the health of horses. This is an important part of equine welfare. In order to evaluate that in

China, information related to imported horses' body condition score and fitness level was collected. The BCS system is often used when evaluating individual animals and it is specifically stated within the UK welfare code (DEFRA, 2013). It could reflect the feeding condition of the clubs. The fitness level is closely related to the performance of horses and good fitness level requires consistent good training. Therefore, training quality can be accessed through the fitness level change of imported horses.

4.4.1 Body conditional score:

The body condition score system was developed in 1983 (Henneke et al, 1983) as a tool to estimate the nutritional status of horses. It can be used as an aid to determine if the horse's nutritional needs are being adequately met. It is a valuable tool for Law Enforcement, Animal Control, and Veterinarians who are asked to assess a situation where the animal's health and well-being are in question. It can also be useful for the average horse owner as they make feeding and work plans for their herd. It can be used to access the effectiveness of the feeding management.

In this part of the report, I collected information of imported horses' BCS changes in China. I adapted the UK BCS system instead of US which scores 0-5 because it is easier for the interviewees to give answer with few options. To prepare the interview, I printed out a picture to illustrate the standard system for body condition score. However, after doing that for the first few interviews, I found it inefficient because most interviewees tended to chat with me about how unhealthy the horses in the first few pictures (BCS 0-2) were and end up forgetting what my questions were. This problem reflected the general lack of knowledge about the body conditional score system of horses and this applies to some of the club vets. Although Chinese traditional medicine has a different way of assessing the body condition of horses, it's not as detailed as the UK or USA. Introducing the body conditional score system from the west could be a useful of increasing general understanding of welfare. Because of the general lack of knowledge about BCS among the industry, I asked the interviewee directly about how horses' body condition change after importation instead of showing them pictures. The aim of this part is to get the truthful information of the change of horses' body condition after importation. The information collected can be seen in Table 5.

The results (Table 5) showed that there are three factors tend to have influence on the body condition of horses after importation. The daily training is the main factor that influenced the BCS according to some clubs. After horses arrived at the club, based on the training applied, the body condition of the horse would change. For example, the horse trainer at club A suggested that they do not train horses a lot for the first month after they are imported. Therefore, there is not much change with the figure of horses within this month. As for club B, they tend to train horses more after they are imported. Therefore, the body condition of horses would have significant change after importation. Others suggested the feeding is the main actor that affect the figure of horses. Club G suggested that is the feeding does not change, the body condition of horse won't change much neither. However, for horses in Wuhan which is famous for its hot weather in summer, the body condition largely depends on the season. As club I suggested: 'most horse would lose their appetite in hot weather and therefore, lose weight in summer'.

Different from the original purpose of BCS which is to estimate the nutritional status, training and exercise level were suggested by most clubs to be the main factors of BCS change instead of feeding. This result raised the problem of the poor exercise plan inside the isolation box. And horses lose muscle during isolation. 'horses look skinny after they are imported' as interviewee in club F suggested: 'that kind of skinny is different from malnutrition. Because they are athlete horses and they used to have muscle. When they do not exercise for a while, the muscle will change into fat. They will look fatter without muscle. After that, they will experience the weight drop. That kind of skinny is different from this one'. There was also misunderstanding between BCS and fitness level and there was no clear line in between. Most interviewee would describe the body condition and fitness level together. Besides that, the description of 'the muscle will change into fat' is very uneducated since muscle fat cannot change into muscle. Horses can only grow muscle and lose fat.

4.4.2 Fitness level:

The interviewee at club A suggested: 'in the first 1-2 months, we think the horse's fitness level is okay due to their long time resting (in the isolation box). They might act lazy and the movement was not very smooth. After that 1-2 months, they would be able to get back to the fitness standard they used to be'. The description here suggested the lack of knowledge about horses' fitness which could drop when horses are not worked and improve when exercised. Besides that, climate changes, flights and transport can reduce weight and the level of stress (Marlin et al, 2001). As for the ponies they use for teaching, he suggested: 'since we bought mature ponies mostly and there is quarantine period after they are imported. They need 1-2 months to get used (to the environment). During this period, we will lunge them and ride them to help riders to know the horses. We will also try to find the right kids for the right horses. There won't be a large amount of exercise'. As for the competitive horses, the adaptation tends to be quicker and they would put horses directly into regular training after importation. Because as the interviewee suggested 'they (competitive horses) just need some time to adjust themselves instead of getting used (to the environment)'.

For club B, the adaptation is similar which usually takes a month because of the horses were fully-trained before importation. The leading rider of the club also pointed out that the fitness level of horses tends to go down after importation due to the different training and riding. 'In China, the most common condition is that the fitness level go down after importation. Keeping the same fitness level for several years is considered good for most clubs' he suggested 'because our skills of horse husbandry and training are very limited compared to the developed countries in Europe. Because the equine industry in China has just got popular since 2008 and it's still on a very early stage'. Luckily, this situation has improved since 2008, especially for the professional team. The interviewee suggested: 'with more and more western skills involved and training methods adapted, it is becoming optimism. The fitness level doesn't go down as quickly as what it's like during former years.' But the problem still remains as the interviewee suggested: 'the fitness level (of competitive horses) would still go down for most of time. For example, if you import a horse that can jump 1.4 m, there is a high possibility that it can only jump 1.1m after few months. It's almost impossible for a 1.1 m imported jumping horses to develop into a 1.4 m jumping

horses after import.’ As for club ponies, since the owners who purchased those horses did not have much requirements for their abilities, the ponies that they imported for club riding is of low fitness level when they are imported, therefore, would remain the same years after. Therefore, the problem of fitness level dropping is mainly focused on competition horses. This is the main problem the industry is facing.

The interviewee misunderstood the difference between exercise and training. According to Marlin (Marlin, 2014), any activities that increase the metabolic activity of muscles (increase the rate at which they are using energy) can be considered to constitute exercise. This results in other changes in the horse’s body including increase in breathing rate and depth and heart rate. These changes occur to help transfer more oxygen to the muscle and to remove heat and water products such as carbon dioxide and lactic acid. Exercise, however, always uses up energy and does not result in an increase in fitness. The imported horses in China need to be exercised instead of trained to keep the fitness level unchanged. Training aims to improve the fitness level.

The club C’s owner (also the horse trainer) mentioned that the adaptation for horses after importation takes about a month. During this time, ‘we don’t (let horses) do much intensive work and the exercise intensity level would increase with time the interviewee suggested: ‘I do not let horse jump 1.5 meter at the beginning of class neither. Because the time difference alone is a lot for horses to adapt’. The interviewee thinks that the imported horses are of ‘great athletic ability’ and the exercise ability is great too.

The rider at club E suggested that since the horses they imported are fully-trained, the adaptation would take 3-6 months and after that, horses could be put into classes. At the same time, they do face the same problem of grade going down. ‘It differs with horses’ he suggested: ‘the training may play a part in this. What we are trying to do is to keep them at their best when competing’. When asked the possible reasons behind it, he replied: ‘70% of horse and 30% of the rider’ he added ‘riders are important and technique is important’. During another interview of this club, the medicine manager suggested that the vet plays a major part in evaluating the fitness of horses and riders could help with that. ‘The vet is the only person who could give suggestions about what distance the horses might be suitable for according to the respiratory tract check and other health check results. Respiration is the most important thing for competition horses. Training and feeding can only help improve the fitness with a healthy respiratory system’

According to Marlin, the intensity of exercise for a horse depends on some factors specific to the horse such as it’s innate or genetic ability or talent, its current of fitness, its age and any health problems or injuries. The exercise intensity includes speed, distance, weight carried, terrain, and climate (Marlin, 2014). The interviewee suggested that the vet is the only person to give opinion on the running distance of horses based on health check. However, this is not enough according to Marlin, innate or genetic ability and current fitness need to be considered as well. The vet does not specialise in riding and therefore, cannot correctly assess that. Trainer or rider should also be suggested to get involved.

The rider at club F suggested that the fitness level of these imported horses is good and they can achieve things that are impossible for the half-breed horses (horses that are bred from imported horse and local horse). The adaptation of these imported horses, however,

differs with horses. 'It (adaptation) depends on the condition of horses. We will train the horses right after they are imported. The training here I mean is just to graze. Grazing is a way of training too. Lunging is a way of training too. The mild training is needed here. If horses are too tired to exercise, we will just let them rest instead. But within 10-15 days, they will be fine. For some horses, it can even be 3 days.'

Training can be physical that aims to increase muscle strength or endurance. However, not all training is 'physical' (Marlin, 2014). Training can be divided into two types: physical training that makes exercise easier for horse or allow them to exercise longer, skills-improving or behaviour-modifying training such as loading trailer and standing when rider mount the horse. Both of those kinds of training aim to make changes instead of keeping them health. The interviewee here described that he considered grazing as training which did not involve learning process. This is not correct according to Marlin. The interviewee mixed up the concept of exercise and training. This reflected the poor understanding of horse training within the industry.

4.5 Common diseases (Table 6)

4.5.1 Ulcers:

Equine gastric ulceration was first described in 1986 (Hammond, 1986) and is common in all types of horses. Increased acid exposure is the predominant cause of ulceration. Although the ultimate effect of stabling versus pasture is unclear with no significant difference found between racehorses kept in pasture full time and those stabled full time (Bell and others, 2007), factors such as exercise intensity diet and stress can have greater influence on ulceration. It has been suggested that it is more common in horses fed twice daily than those fed three times a day. Low forage diet, intense exercise, high concentrate diet, regular transport, intermittent starvation, management change, water deprivation, prolonged stabling and stress are risky factors for equine gastric ulcer (Hepburn, 2011). The information gathered of equine ulcer in China is as following.

To start with, the diagnosis of ulcers is very vague in China partly due to the equipment limitation. Most clubs are aware that ulcers are very common amongst horses. The vet of club B said: 'about 90% of horses are likely to have digestive ulcer in China' and the vet of club D suggested: 'in the racing part, about 80% of horses have ulcers now.' The vet of club D even suggested 'for ulcers, almost all the horses have it'. The vet of club G also suggested that in his club, most stomach aches of horses are caused by ulcers. However, the diagnosis of this disease is a little behind and this is not a common term. 'The concept of ulcers in horses is fairly new in China' as one of the vets suggested. 'We are supposed to use gastroscop to diagnose the disease. Unfortunately, we do not have that. In fact, the concept of ulcers has not been used a lot within the industry. The diagnosis does not happen often' the vet added. Therefore, the diagnosis according to vet's own experience becomes the predominant way of recognizing the disease. The vet at club G suggested: 'technically speaking, we don't have a specific way to diagnosis ulcers. But we can diagnose that according to our experience for most of the time. We know how we are feeding horses. Based on the clinical signs, stethoscope results and temperature measurements, we can basically tell that they have ulcers or not. It also happens more frequent when the season changes'. The possible causes of ulcers take a part in the diagnosis too. 'Horses are very

sensitive' the vet at club D said, 'the change of weather, long transporting journeys and stress are likely to cause ulcers. Wrong feeding environment would cause that too'. Diagnosis according to abnormal behaviours is another way because 'most crib-biters have middle or worse level of ulcers'. However, 'mild ulcer can't be found easily' the club D vet added.

According to Hepburn (2011), the clinical signs are variable and often vague for ulcer diagnosis. Clinically relevant ulceration can occur in asymptomatic cases, although the prevalence is significantly lower. Gastroscopy is the gold standard diagnostic technique for the identification and grading of ulceration. However, this is not currently available in China because of the underdeveloped industry. Most vets simply diagnosis it by clinical signs and a combined faecal occult blood and albumin test has been suggested by one of the interviewees, however, it's not accurate enough. This is a large drawback of the equine welfare in China.

When it comes to the treatment, the club G vet suggested: 'we have two ways of treatment. Because if we don't treat that disease on time, it will quickly develop into intestinal blockage and constipation. Therefore, based on this situation, we need to look at the clinical signs to stop the pain and diminish inflammation. We will listen to the intestinal sound at the same time. If the sound is not good. We will feed them oil medicine and stomach powder (Chinese traditional medicine) to prevent them from the possibility of having intestinal blockage'. Since the vet has not mentioned any example of untreated ulcer developed into intestinal blockage and constipation, I tend to think it is a common belief within the vets' group that this would happen. The result of this treatment is positive according to his description. For race yard 1, they used to use cimetidine to treat ulcer, then they introduced omeprazole. Club D suggested that they are using something extracted from plant which is produced in Ireland for both treatment and prevention. But he has not mentioned the effectiveness of this medicine. The attitudes of this disease between local horses and imported horses can be different according to the description of the manager of race yard 1. 'Our horses are fine with this disease because they are local and have high tolerance. There has not be a large number of horses have ulcers'.

According to the literature, a combination of pharmacological (such as Proton pump inhibitors and Omeprazole) therapy and risk reduction is vital in most ulcer cases and can be effective regardless of training intensity (Hepburn, 2011). Omeprazole can also be used as ulcer prevention medicine. And this medicine has been mentioned for several times during the interviews which proved that this medicine is known and used in China. The prophylactic therapy with omeprazole for prevention of equine gastric ulcer syndrome was studied by Mason and the result suggested that omeprazole prophylaxis in active training horses significantly reduces gastric ulceration compared to no prophylaxis (Mason, 2018). The nutrition management of horse with ulcer was studied in 2017 with specific diet recommended including feeding as much forage as possible, feeding lower energy fibre sources to maximise chewing, adding chaff including alfalfa, feeding vegetable oil supplement, providing more pasture turnout and avoiding transfer (Andrews and others, 2017). Repeat endoscopy used to confirm ulcer healing is recommended. Maximising consistent daytime fibre intake and constant provision of water are the key and giving a small forage meal 30 minutes before exercise is recommended (Hepburn, 2011). In China,

the pharmacological treatment comes from Chinese traditional medicine by using oil medicine and stomach powder based on the clinical signs and vets' experience.

4.6 The abnormal behaviours:

The horse evolved as a herd animal and in natural state they would spend 16-20 hours a day grazing and browsing for forage. As a result, they have a strong behavioural need to chew and this needs to be met in modern management through appropriate provision of forage and grazing (DEFRA, 2013). However, this requirement is hard to achieve in China because of the limitation of land. Grazing is mostly unavailable. Proper exercise and feeding become crucial for keeping horses in China. If these are not done correctly, abnormal behaviours such as crib biting, weaving, box walking or even self-mutilation might occur. There has been study suggested that the occurrence of abnormal behaviour at the point of initial display may appropriately indicate that the animal is experiencing challenges within the environment (Greening, 2018). Therefore, the assessment of abnormal behaviour could reflect the general welfare condition. People's attitudes towards it could suggest their understanding of welfare.

In order to make the behaviours understood by the interviewee, I showed the interviewee the picture of horse's behaviour while asking the questions. And I also invited some of them to give a score of 1 to 5 to the popularity and the attitudes they have towards these behaviours. 1 stands for very common and 5 stands for have never seen before. As for the attitudes, 1 stands for 'this behaviour is very serious and must be treated', 5 stands for 'this behaviour is not a problem at all and does not need treatment'.

In this part, I interpreted peoples' attitudes towards my question and classified in into 2 categories: authentic answers and inauthentic answers. Based on my lived experience of working with horses abroad, I will analysis the transcript and interpret people's different welfare awareness.

4.6.1 Authentic answers:

4.6.1.1 Honest/direct answer

I The leading rider of club B:

'They are not very commonly seen in this club. Taking box-walking for an example, it may be due to horses being kept in the stable for too long without turning out, so they develop behaviours like this. On the other hand it may be that horses are born energetic and this behaviour helps them to relax. But if they keep doing that, this will become a bad habit.'

'Crib-biting is partly due to some physical organs go wrong and their feeding is not good. They swallow some air before they eat. This is not commonly seen in our club. I know that horses can bite grills or wood at the same spot over and over till it gets ruined. We will use the collar to deal with that. But this can just reduce the frequency but not cue this behaviour completely'

'Weaving may also due to the lack of turn out. This hasn't been seen in our club because our horses are out of stable every day. The reasons for that behaviour I'm sure will need some deep studies. I haven't seen any case in our club yet but I did saw some in other clubs before.'

'Self-mutilation is very rare. Horses will find their friends through smelling. When the smell is not right, they will kick or fight. This could cause damage to themselves. This could be considered self-mutilation. But if it's just they hurt themselves for no reason, it is rarely seen.'

The interviewee answered directly by describing if the behaviour was common in this club. There is reason related to stable management to support the statement as well. This club focuses on teaching kids to ride and all the ponies are imported from France. I also interviewed the owner of the club. Although he personally does not know much about horses, he is very open for advice and this character also makes him to adapt the France club management into his club as much as he can. Here is a quote of the club owner:

'This is a minority business without a lot of smart people in it. Therefore, our goal is to import mature ponies and riding systems. The 'import' means gradually change and a slow transfer of the system. At the same time, we used an optimized and kindly invasive attitude to promote and develop ourselves'

Plus the fact that this club is located in Beijing and has direct contact with the French Government, they should not be afraid to talk truth about horse management. Besides that, the contact that I have in this club is an alumna of mine and she is very supportive of my research and helped me to contact other clubs too. Based on this fact, I think the interviewee was open about my questions.

Due to the interviewee's identity as a horse trainer and rider. He does not have much academic background with horses. Therefore, his responses are mainly based on what he sees. And he always answered the questions with his own experience which showed that he did not pretend to know everything. Such as the answer self-mutilation, instead of denying this behaviour, he talked the case that he thinks that has similarity. This showed that he is open and willing to give as much information as he can to help with my study.

II Manager of Club H

'crib biting is not common here. I've only seen one horse here do that'

'of course. (I think crib biting should be stopped)'

'it (box walking) is rarely seen. I've almost never seen it before'

'I've seen it (box walking) in other clubs before. They seem very anxious. But I've never seen one here in this club'

'no, I've never seen it (self-mutilation) before'

'yes, I did see that (weaving) before. We don't have much of that horses here now. But I have a feeling that this behaviour happens more on thoroughbred. I used to work in another club which is not far from here. There are a lot of thoroughbreds there. And there used to be a lot of horses do that'

'I don't think they take much notice of that (weaving)'

The interview in this club was short and neat due to the limitation of time. The interviewee talked straight forward and simple. And I personally believe that the information he offered

to me came from facts. The reasons are as following: the interviewee has been a schoolmate of mine and he has no reason to hide the facts. Secondly, I came to the club with a student group whose purpose it was to learn about horses. It would be against the purpose of the trip if he did not tell the truth. Besides that, he answered each question with examples to prove that he had seen the behaviours before. This suggested that he was telling the truth.

III Vet of club D

This club D is very professional and the horses here are taken good care of. And based on the information that they provide, the club followed strictly after the competitive horse management rules of Germany. The owner of the club is a well-known Chinese who has joined Olympic before. The horses here are of very small number and this may not be a representative case. When asked about the abnormal behaviours inside the club, the vet answered:

‘we have one horse here crib bites. That was formed before it came here. The crib biting horses tend to be very sensitive and easy to get nervous. I think when it comes to the management of horses, the detail matters. We need to take notice of every little thing that goes wrong. For example. The alfalfa we used to buy is too dry for the horse to swallow. We dip it in water to make it softer and easy to swallow’

The horses here are taken good care of and there are only few of them as well. The interviewee really has nothing to hide while answering the questions here. His answer included a specific example, possible management causes and improvement suggestions. This is very well-formed and self-reflected. Therefore, I considered his answer truthful and honest.

IIII The vet of R1

‘crib biting is the most common one here. Weaving is common too here. Box walking and self-mutilation have never been seen before’

‘crib biting 2, we let horse wear the collar. Weaving is not treated much here. I saw one case several years ago that they put a ball or a bottle inside horses’ stable. They did that themselves without asking vets’ opinions. I’ve never seen self-mutilation horses’

The vet’s description is the same as the rider’s which proved that they are telling the truth. The treatment of these behaviours was not based on the vet’s opinion. It may be because the vet is a young girl who does not have as much as experience as the rider.

4.6.1.2 Discreet answer

When asked if the abnormal behaviours were commonly seen, the owner of club A replied:

‘not very common. But I’ve seen those before, except the self-mutilation. I’ve never seen self-mutilation horses before. Crib-biting is the most common. Weaving is the second. Box walking is not that commonly seen’

‘crib biting: 3-4 (the score ranges from 1 to 5, 1 means that the behaviour is very serious which must be stopped immediately, 5 means the behaviour is very common which shouldn’t be stopped). Some crib biters can be treated. For others, it may not be a good

idea because it could cause depression. Box walking 4-5, there is not much can be done. Maybe more turn out. Some horses just have the habit of walking which helps them to relax. Self-mutilation: 1, Weaving: 3-4'

The interviewee did not give much extra information and just answer the question that I asked. It's because that as a club owner, he has more concern than others. Despite that, his answer does not have conflict with the club vet's answer which shows that they are both honest about this question. But the answer was very discreet and he did not seem to want to talk much.

4.6.2 Inauthentic answers

4.6.2.1 Aggressive answer

I Vet of club E:

'The picture you put for self-mutilation is not precise. This can be taken as horses have parasites and try to get rid of that. Weaving happens when horses are anxious. Our horses often do that before big race and hardly do that daily. But some horses do that daily too. It's like the crib biting. Horses are too bored in the stable and need to find things to do. If we put them on the prairie, they won't crib bit or weave anymore'

The interviewee used critic as the first thing to say when answering my questions. Then he gave very vogue answer to my question. He did not talk directly about this club. Instead, he only described the probable cause of these behaviours. And the cause he gave is very superficial which showed that he does not take notice of the those daily. And his ignorance about the crib biting showed by saying 'If we put them on the prairie, they won't crib bit or weave anymore'. He made this statement without any proof. This shows that the interviewee does not care much about these abnormal behaviours of horses daily and he does not have the intention to learn more about them neither. Because he thinks that you can only stop the behaviour by putting horses on the prairie which is impossible to achieve in Beijing. The general attitude he showed here is 'there is nothing we can do when it comes to crib biting.'

'Crib biting is common and it's same in other countries too. Self-mutilation happens mostly when the horses have parasites.'

When I asked about the frequency of these behaviours, 'crib-biting is also common in other countries' was the first thing he said. This showed the interviewee's awareness of avoiding responsibility. It's is like say 'it's not my fault that horses crib bit, horses in other countries do that too.'

'This (crib biting) is a very bad behaviour. It could make the muscle grow bigger and thicker around their neck. The air get inside could course stomach ache. The teeth can be teared which will affect their chewing. This is certainly a bad and very serious behaviour. But there has not been effective ways to treat it. Boxing walking won't make much difference. We definitely need to take measure to do that or finding the reasons why they are doing that (self-mutilation). They may have parasite or being allergic and grow bumps on the skin. Weaving is not a big thing.'

When he talked about his attitude towards these behaviours, the answer he gave is very different from the attitude he showed during the interview. In this part, he mentioned how bad the crib biting is and what damage it could cause. However, in the former interview, he showed ignorance and careless attitude towards this behaviour. He also emphasized his strong attitude by saying 'we definitely need to take measure to do something'. However, this statement certainly couldn't be achieved by holding the attitude of 'If we put them on the prairie, they won't crib bit or weave anymore'. I would argue how would he achieve that by holding the attitude like that. On the other hand, this equine hospital is one of the few equine hospitals in Beijing. More than 100 riding clubs rely on these few hospitals to treat horses, which make this hospital not in lack of client. Due to the lack of competitors, the vets here do not have the urge to improving their technique. This fact makes the vet here easily satisfy with what they are doing now. They do not reflect themselves or their skills.

II Medicine manager of club E:

'Crib biting is commonly seen. Boxing walking is very rare and I almost have never seen. Self-mutilation is very rare. They don't hurt themselves. Weaving have been seen too. When horses are excited in the stable and would swing their body.'

The interviewee is more relaxing and open than the vet. He is willing to provide the information more openly than the vet. The answers were straight forward. Because he did not deny having abnormal behaviour horses from the start. This made me believe he is telling the truth because as an interviewee and a researcher, I've already formed an answer to this question based on my study of this certain club. The interviewee's answer does not hold much argument against mine. Therefore, I think of his answer as straight forward.

'Crib biting can hurt horses' teeth and is a very bad behaviour. But there is nothing you can do about that. Weaving can be stopped by putting something inside the stable to prevent them from moving around. But crib biting is very hard to deal with. We could put the collar on horses. But they still need to drink and eat which cannot be done with the collar. If you take the collar off, they will do that again.'

The interviewee knows about the basic management of the club and he provided the information that they have tried the collar and it does not work well.

'When horses keep walking in their stables, we would try to find what the causes might be. It could due to loneliness horses are facing. I would put them close to one another, this will relive the behaviour a little.'

The second interviewee talked more openly than the first one and the answer is more straight-forward. He talked mostly the fact and does not show much of his attitude. This could reflect the superiority the vet has inside the club. In another word, not all the people inside this club have huge because this is a large equine centre, only the vet does.

4.6.2.2 Over-confident answer

I Club owner of club C

'(All the behaviours in the photos) very rare. This boxing walking horse, do they keep the horse in the stable all the time? Crib biting happens more on stallion. This may be born naturally with or learned from others. I don't have this kind of horses in my club. I won't buy

them. Because their life may be shorter with this behaviour. I've seen one before which didn't live for long'

Very quick to deny at the beginning which came out without thinking. Then he did a rhetorical question to emphasize his denial. However, based on the fact the major memberships of the club are children who are non-experienced riders and there are hundreds of horses, it is highly impossible for him to give such strong answers so quickly. The interviewee likes chatting which is showed by him talking a lot in the former questions. But here, he did not give much details. And he turned the topic into buying horses. During the whole answer, he seems very decisive and he seems to have a purpose of show off.

'This (weaving) may due to something wrong with their hoof. I've seen horses do that before. You can do nothing about this behaviour. They will do that no matter where you put him. I don't think this behaviour will affect horses much. The self-mutilation is very rarely seen too. Even the horse with worst temper won't do that. I've never seen it. I think horses with this habit must be born with it. Horse that box walk a lot may due to lack of exercise. You need to ride, (the horse need to) be ridden and exercise more. You need to think of horses as human when taking care of them.'

The interviewee is very confidence when it comes to horse management because the phrases including 'you can do nothing', 'no matter where', 'I don't think', 'won't', 'must be' and 'you need to' are all definite statements. This could show that: firstly, the interviewee feels very comfortable during the interviewee and he talked without concern. Secondly, he is very confidence about his work and has personal judgement towards anything related. Thirdly, he saw the interviewee as a student so that he held an attitude of teaching and he does not care if his word is incorrect. Because he did not suggest any evidence to back up his statement.

II Leading rider of Club F

'these behaviours have been seen in all the clubs'

The interviewee did not deny these behaviours from the beginning which made me reduce my doubt about his answers.

'They are all very common to see. self-mutilation is not common. It is rarely seen. Weaving is not very common, but it's still been seen.'

'I can explain it to you this way. This behaviour (crib biting) has happened 1%-2% of 100 horses. There must be 1-2 horses do that among 100 horses. No more than 5 are doing that. Boxing walking is similar to crib biting which happens 1% of 100 horses. Self-mutilation may be 0.1%. Weaving is 1-2% which is common too.'

The interviewee mentioned all the data without any proof. After hearing this statement, my opinions towards his answers changed. I started questioning how on earth did he know that 0.1% of horses had self-mutilation and how did he get the idea that 1%-2% horses among 100 crib bit. All his answers seemed over-confident and unreal. The deny he gave at the beginning seemed to be another way of cover up. By acting being honest at beginning and then stated things without any back-up evidence. The interviewee might be boosting or showing off.

'Weaving (attitude score) is 5. Because it doesn't hurt anything. As for self-mutilation, there is really nothing you can do. Horse likes freedom and they can easily develop bad behaviours staying in the box all the time. For boxing walking horses, you will need to try to keep them from walking in the stable. More grazing could be benefit to them. They will eat grass once they are out. They cannot walk around once they are out. If they are outside more and have communication with each other, it's good for their mental health too. Horse can develop bad habit if you keep them isolated. You need to get horses to get in touch with each other. Horses can learn from each other during communication and you don't need to teach them. Horses are good at learning.'

The statement here was more real than the former one and probably came from his personal experience.

'The collar can be used here. But that is not very useful because horse is too smart. The best way to avoid that is to leave no things in the stable for them to crib bit on. You can remove the things inside the stable. You can also put things on the fence that tasted very bad for horses. They won't eat it anymore. After few years, they will get rid of the habit.'

'The collar. It is very serious you know. If they start to crib bit, their teeth will be worn down a lot. Horses depend on their teeth to eat hay. They will stop eating if they feel pain in their mouth. They won't be able to get enough nutritious this way.'

The treatments towards crib biting were poor according to the interviewee. His description was detailed which suggested that it was based on his own experience. This reflected the lack of knowledge of horses because there have been lots of way of reducing crib bit.

The interviewee also believed that the weaving did not need to be treated because it wouldn't cause any trouble. In some way, this idea is similar to what is mentioned by Cooper and Mason (Copper and Mason, 1998). They agreed that the label abnormal is ambiguous and value-laden and does not help to interpret the behaviours of captive animals. Behavioural problems are undesirable as if they are harmful or if they are a sign of a poor environment, but at present they will generally only be treated if they are undesirable to people. The interviewee here thinks that weaving does not cause trouble for them and cannot be considered undesirable to people. Therefore, it does not need to be treated. However, animal's behaviour can relate to welfare. Some behaviours are the indicators of poor welfare and these behaviours are a means to adapting to captive environment (such as Dawkins 1980; Mench and Mason 1997). Behaviour such as weaving does not be considered harmful but it can still reflect the poor captive environment of this club.

4.6.2.3 Negative answer

Answer from the manager of club I

'No, we do not have any of these bad habits here now.'

'Yes, definitely (we need to stop these behaviours). You also need let horses out stable more often. That is because of the mental problem and because they are staying in the stables for too long and develop these bad habits.'

This club is a new club which is still under construction. The interviewee is the one in charge of almost everything of the club. The answer she gave is very short and certain. Based on the fact that the imported horses here are Lipizzaner and Arabian stallions and most riders here would be inexperienced riders, it is highly possible for horses here to develop these behaviours. However, the interviewee seemed to have a closed attitude towards all that and refuse to share more about the club.

4.6.2.4 Avoiding answer

Vet of R2

'There are crib biting horses. But the number is not very large. I know the box walking you are talking about here. Horses that keep walking around in the box are considered box walking. They may have mental diseases. Self-mutilation means horses with hot temper would kick the wall and hurt their feet in the end. Weaving is the behaviour of horses keeping shaking head and weave body left to right. I've seen all these behaviours before and some of them happened when I was at my old job in Beijing. They probably have metal issues and behaviour problems. We do not have horses of those really bad behaviour here. But I've seen them all during the past years. We have crib biting horses here. It's really hard to fix.'

The interviewer claimed that he has seen all the behaviours before. He does not have those abnormal horses here in the club except crib biting. And then he specially claimed that this behaviour is hard to correct. The answer he gave here is very vague by first claiming none of those behaviours exist here, then mentioned they do have some crib biters here. These two sentences conflicted with each other. Therefore, I would hold doubt about his words. This chaotic logic could be a result of the interviewee failed to cover up the false statement he gave at beginning. He tended to talk more but the more he talked, the harder it was for him to hide the truth.

'Back when I was in Beijing. I've seen horses keep shaking heads without resting. They even do that during competition. But as for self-mutilation, this kind of horses can be aggressive towards human. I've seen some horses doing that because they are in shock and they are scared. People did something to hurt them. Therefore, they are trying to revenge. It's is not a common situation. But I've seen all of these before. Horse were attacking human and biting people once they saw people. That was all because those people hurt them in the first place. You see, horse see human as animal too. We are no difference. If you attack, how could I not fight back? Horses see human as animals like wolf. You do hurt them. If you do, horse maybe thinking about 'people can hurt me too' and they will fight back. They are just trying to protect themselves.'

He then turned the topic into talking about the club he used to work in. This proved my former noting. And he could be protecting the club he was working in and hiding fact on purpose. The other possibility might be that he no longer spends lots of time with horses here in this club. Therefore, he can only remember the time when he did spend a lot of time with horses which is in Beijing. The problem showed here can either be that the vet of the club trying to hide the fact to avoid responsibility or the lack of performance of vet's duty.

4.6.2.5 Unpractical answer

Leading rider of R1.

'Yes, we do have these (abnormal behavioural) horses here. Crib biting can be imitated. Horses can learn this from one another. This behaviour is formed because horses are bored for staying in the stable for too long. Horses with this behaviour can have very bad health with digestive issues. If horses crib bit, they will easily have stomach ache. Digestive disorder can be developed with the air inside their stomachs. Horses with this behaviour will have stomach ache from time to time.'

'Yes. (we must do something to stop this behaviour) We have lots of ways to do that (crib biting). We put collar on them and will keep them outside more often. They can change or reduce that behaviour by spending more time outside of stables. The best way to treat them is have them outside more. We need to keep them from being bored to treat this kind of horses.'

'(Asked about box walking) when horses have rest in stable for too long without being out or the feeding is too nutritious, they will get excited and like to walk a lot inside the stable.'

'It (box walking) is not common here. Because we have specific training plan of horses to keep them away from these behaviours. We have very few horses behave like this here.'

'Yes. We should change training plans according to this behaviour (box walking). More exercise could help to stop horses from walking around in the stable.'

'There are lots of reasons for this behaviour (self-mutilation) to happen. We need to find out the reasons first. Some horses have skin disease or worms inside belly causing discomfort. But horses cannot speak when he doesn't feel well, he can only show it through his behaviour. He could look back at belly from time to time because of stomachache. He will bit himself because there are parasites on his skin. Self-mutilation is just a sign of something else. It cannot happen for no reason. If you are experienced, you will be able to tell the reasons according to the sign. As a horse trainer, you need to know each horse to do that.'

'We don't have it (self-mutilation horse).'

'We have horses behave like this (weaving) here. This is just like crib biting, horses do that because they are bored. We used to have a horse keeping doing that all the time. He even stepped out two holes by doing that. We tried to distract him by putting some toy inside the stable. Actually, the way to deal with horses like this is to keep them outside. Because horses are born to run in the field and are kept inside stables according to people's will. We changed their natural habit. Horses love freedom which can includes running in the wild all day long. Being kept in a stable is very uncomfortable for horses and therefore, they will develop abnormal behaviour. What we should do to prevent it is to give them more turn out time. Only this way, we can change this situation.'

The interviewee mentioned that they have crib biting horses and weaving horses here in the club before, self-mutilation and boxing-walking are not common here. His attitude towards these behaviours and he thinks they should always do something to stop these behaviours. The interviewee did not give specific examples, instead he talked more about

the cause of the behaviours. He seems to have a good understanding of these behaviours and think there are lots of method to treat these behaviours. He also kept mentioning keeping horses outside could avoid these behaviours. However, this is an unpractical suggestion because of the limitation of land in China. This is another way of avoiding responsibility.

4.6.3 Out-dated knowledge

I Answers from the vet of club A:

‘Crib-biting is very common and each club will have few horses that are doing that. It is a very bad habit, but very few can be done to fix it. Box walking and weaving are common as well, especially in thoroughbred, not much in warmblood. It may have something to do with their hot temper. Because horses are social animals. If you keep them individually, they will be anxious and develop these bad habits. Self-mutilation is not common unless there is something wrong with the animal. It’s only seen when the horse is in shock. They may dig with their feet and hurt themselves’

‘As for crib biting, there has not been an efficient way of treatment. Germany and Russia used to study that through operation. These can only release this behaviour a little. But no big change can be made. Boxing walking and weaving do not have effective treatment unless you sedated them. Or you can comfort those horses by distracting them with toys. Self-mutilation does not happen unless the horses are under special condition. Most of time, horses are good at protecting themselves. I haven’t seen any horses do that daily. If that happens, treatment must be needed’.

During this question, the interviewee focuses on talking about his personal opinions towards the behaviour. The situation of the club has not been mentioned much. But through his talk, we can still figure that behaviour such as crib biting, box -walking and weaving are common in this club.

The interviewee talked blandly and directly. When I asked him if there are these behaviours in his club. Based on my knowledge about the club which includes; firstly, it has over 200 horses and they use most horses here to teach inexperienced riders who may have never ridden before; Secondly, the club does not have much free land to turn out horses because it located in Beijing and the land of the city is highly-priced. Most horses here should be kept in the stable a lot, I assume that there should be horses of this club have abnormal behaviours. Apart from that, crib biting and weaving are both commonly seen in the horses I used to work with. I have a knowledge that it is common for most club to have these horses. Therefore, I think there should be horses have abnormal behaviours in the club based on its inexperienced riders, limited turn out land and the universalities of these behaviours across the world. When the interviewee’s answer agreed with my expectation, I assume that the interviewee has been talking directly and blandly.

The operation that the interviewee mentioned was first developed by Forssell in 1926 which involved removal of those parts of muscles that flex the neck (Mason and Rushen, 2006). This operation requires extensive surgery and the results in considerable disfigurement of the horses’ appearance. A modification of the original technique involving less radical resection of these muscles has been described by Peterson (1965). In 1984, a

further study was conducted to treat crib biting and wind sucking horses with a modification of the Forssell procedure. The result showed that the modified surgical procedure produced a better result than neurectomy alone, without disfigurement of Forssell's procedure. When the interviewee was describing it, he used this procedure as an example of western treatments of crib biting to show me that he was 'fully aware' that crib biting's treatment was not very effective in other countries neither. However, this happened to suggest his out-dated knowledge since the procedure was no longer used in the west. The way he suggested it was confident which showed even more of his ignorance.

First of all, most of the study related to the operation was conducted more than 30 years ago and they are seriously out of date. As for the operation itself, it has been no longer conducted now. Take UK for an example, it has already abandoned this treatment because the operation is against horses' welfare with muscle removed from the neck of horses.

II Answer from the vet of Club G

'We have some crib biting horses. Last year, we imported some thoroughbred from Australia and some of them are crib-biting horses. My way of treating this behaviour includes electric treatment. The effect is good with some horses and okay with other too. Horse with kicking habit is hard to deal with. We have some of that too and there is no good treatment for that.'

Although the interviewee did not answer my questions directly, he had the obvious motion of trying to recall all the horses in the club before giving the answer. This make the answer believable to me. And he does not seem to try to hide anything. In my perspective, if the interviewee did not deny the questions and admit that they do have abnormal behaviour horses in the club, I think they are telling the truth. Because I assumed that the since the club do not have much field for turning out horses, there should be horses that have abnormal behaviours. When the interviewee's answer agrees with my prediction, I think their answers are believable.

'We have both of those (weaving and box walking) too. But there is no good treatment for neither of those.'

'There is damage (of all the behaviours mentioned) of course. But there has not been effective way to treat those yet. There is nothing we can do about that. I have read about the western way of doing that. They don't have very effective ways to treat them neither.'

The statement here showed the out-dated knowledge. It has been suggested that the underlying neurochemistry of psychostimulant-induced (PI) stereotypic behaviours may provide useful information about the neurochemistry of environmentally-induced (EI) (Cabib, 1993). Research has suggested that dopamine is the primary neurotransmitter involved in the underlying neurochemical mechanism of PI stereotypic behaviour and that the nucleus accumbens, neostriatum, ventral pallidum and substantia nigra are the primary brain regions (Ellis et al, 2015). Collars were used a lot to stop it. However, it has been suggested in recent years that horses develop stereotypies as a coping mechanism to deal with the stress imposed on them. And with good environment adjustment, horses might not need to perform those actions as much (The horse, 2016).

4.7 Analysis of the veterinary condition

The veterinary industry in China is consisted of two parts: the traditional Chinese veterinary medicine and western medicine. The former one is largely used in the past. China has a long history of domestic horses. Long before the western medicine was introduced into China, the only way to treat disease of animals is through traditional Chinese medicine. A lot of skills were developed then such as acupuncture and massage. After the western medicine was expended into China, vets have more options to treat horses and this skill soon replaced the traditional medicine and became the mainstream treatment option.

During this study, I interviewed 7 vets, working in 4 cities including Beijing, Qingdao, Wuhan and Inner Mongolia. These are 4 representative cities in China because Beijing is considered where the industry is the most advanced in China now, Qingdao is an example of the northern area where using horses for farming was very popular in the past, Wuhan is a city where horses were not popular in the past partly due to the climate, however, has built one of the largest race yards across China during recent years, Inner Mongolian is the well-known horse area in China where people live on horses and treat horses as a part of their daily life. Therefore, the vets from these 4 areas are representative samples across the China and can suggest the general problems.

4.7.1 Industry evolution

The vet of this club A came from veterinary family and his used to be specialised in Chinese traditional veterinary medicine. He has more than 30-years' experience of working with horses as well as other animals such as chicken, donkey, mule and cow. He grows up in the countryside of China and got a degree in agriculture. Working with horses is what he is focusing now and he is a full-time vet of this riding club.

During this interview, I first suggested him to fill out the questionnaire for me. But he seems to be uninterested and hesitated a lot. He turned the questionnaire and looked through it quickly and continue to have casual conversation with me instead of filling up the paper. I think this is because he is not academic and have trouble or don't want to try to understand the questions in the questionnaire. Therefore, I instantly give up the questionnaire method and ask him all the questions orally instead.

When asking about gastric ulcers and if they use faecal test, he mentioned:

'If it comes to the experimental test, the horses will probably die soon. Vet clinic is not like the hospital for human where you can get a full body check. The equipment for equine treatment is very limited and not a lot attention was put on that part neither. Only few equine hospitals located close and horses will mostly die by the time you send them there.'

And when asked about if the situation has changes during recent years, the interviewee responded:

'In Beijing, there are very few equine hospitals. You can name them. It's still very limited.'

His complaining is believable to me because firstly, he has been in the industry long enough to make that judgement. Secondly, based on my personal experience with the riding clubs in Beijing (I live in Beijing myself and learned riding in one of the clubs years ago), the interviewee's words sound very sincere. Besides that, he spoke slowly and had a clear time

period of trying to recall things. He did not seem to exaggerate things. and it was the same as what I've seen and heard before. Therefore, I think he was sincere.

Beijing is the major equine city in China and about 60 equestrian clubs have already achieved an advanced standard in Beijing and this number will almost certainly continue to grow (Ede, 2015). However, the number of equine hospitals in Beijing very limited. According to the interviewee, the lack of equine hospital is a problem for the industry development. And it is certainly a problem for equine welfare.

The equine industry of China is comparably new compared to other countries. The veterinary skills are news skills too alongside with a tough history of development. In the past, there was not a independent veterinary medicine major and it was mostly included inside animal science major. In 1998, animal science major was formed by emerging animal husbandry and veterinary medicine, animal nutritious, feed process and bee keeping together according to the Ministry of Education in China, and it was then focusing more on the genetic breeding, nutritious and feed composition study. However, as for the veterinary medicine major alone, it is mostly included inside of the animal science major. As a result, most veterinary students need to major in classes related to food security, feed processing and genetic engineering which have very little connection to veterinary practice, plus the limited 3-year undergraduate studying time, the time left for veterinary skills study is far away from enough for practicing to become a qualified vet. Therefore, after they graduate, they need to spend a lot of time practising and doing internship. Due to the hardness of this process which is also not an efficient way to make money, most students turn to other jobs that are more profitable. As a result, a large portion of vet major students choose to go into breeding industry or others instead of becoming veterinarians after graduation because it is easier and short-time profitable. What the interviewee mentioned about the limiting number of vets is partly due to this situation.

In the modern veterinary medicine industry, according to the age group, the vets can be divided into two groups: the young generation and old generation. The interviewee is an example of old generation vet who has family background in veterinary medicine and started to officially work as a vet long before the formation of Practicing veterinary certificate which is in 2009. In the year of 2007, the government came out with the rule that all the vets must have degree in veterinary medicine in order to get a Practicing veterinary medicine certificate with an exception of country vets who are allowed to practice without the certificate. For the younger generation students who have had professional veterinary training in college, it is not hard for them because the exam does not include practise test and students could pass by memorising all the theories without doing actual animal experiments. However, for most old generation vets who has already worked as vets for years and they think that it is unnecessary for them to take the test since they are experienced are better at practising skills than writing the test paper.

The interviewee is an old-generation vet who are very experienced with animal diseases, however, is not very academic. It showed at the beginning of the interview that he seemed to have trouble understanding my questionnaire.

4.7.2 Superiority

In the following interview, I came to another club (club E) in Beijing which is considered to have one of the largest groups of imported horses across the country. The club was contacted by a newly-met friend who has a contact in the club. I personally have never been to the area where the club is located. The transport to the place is very inconvenient and it took me more than 1 hour on a taxi to get there. The club is located near a small town where the staff usually buy lunch. And there is only one bus in the small town that is connected to the city centre. Even Didi (Chinese Uber) which is a similar app to Uber does not work there because of the remote location. All of these made me generate timidity: the remote and unfamiliar place, the contact that I've never met or speak to, the independent trip that I need to handle any possible problems by myself. Therefore, before the interview even started, I became timid even though I tried to act confident like everything is under control. This condition in some way explained what happened during the interview. Based on the problem reflected through last interview, the vets' market is in large shortage compared to the number of clubs in Beijing. Located next to a large equine centre in Beijing with very few decent veterinary clinics around it, this veterinary hospital is in no lack of clients. As a result, the leading vet here is very proud and does not take an ordinary student like me seriously, plus the timidity I have before the interview started which the interviewee can easily realise through my talk because of the unconfident voice. The vet was a professional vet who stands between the old generation and young generation. He has an official veterinary degree from college and the clinical practice certificate (I got this information from others). At the same time, he is middle-aged and has been working as a vet for around 20 years which enabled him to become a head vet of the clinic. Therefore, he can be considered both experienced and academic.

At the beginning of the interview, the leading vet showed his pride by being very protective of his personal information and consistently questioning my intention of recording the conversation by saying 'I don't want to give too detailed information towards myself. What do you want to do with it?' right after I asked for his education background. After that, he consistently critic my questionnaire such as complaining that I did not use the coloured printing questionnaire and the pictures that I pick inside the questionnaire are not precise. After me apologizing for that, he kept complaining by saying

'I can fill it out for you. I think the questionnaire is too informal. The club horses and competitive horses are very different. You should have divided them up. Race horse and polo horses are very different too. For example, quarter horses are fatter when imported. Your questionnaire is not detailed enough. I will fill it out according to our race horses. You just need to divide them up and have specific event from the start. You are too general.'

However, the general questionnaire is designed to suit all the clubs in China in order to get organised and systematic result. By complaining about that, the interviewee accidentally showed his ignorance towards research methodology. Considering his position as a leading vet of a well-known veterinary hospital, the academic level of his study is questionable. He later exposed himself by being unable to understand thermoregulation while scanning my questionnaire. By complaining

'Here, you asked the average fitness level of horses. What kind of horses do you mean? Jumping or race horses? It's too general and very hard for to fill out. What do you mean thermoregulation disorder?'

He exposed his ignorance towards the basic concept of animal disease. Considered that there may be some misleading during translation. He may know the disease, however, take so little notice of it that he could not recall the meaning the minute he saw it in paper. In the following part of the interview, he mentioned some veterinary knowledge that is off topic. Example, while he scanned my questionnaire, he suggested that I should change the respiratory disease category by suggesting

'The respiratory diseases include lots of kinds. Such as laryngeal hemiplegia, you need to use endoscope to diagnosis that. And it's easy to see after exercise. This disease is very commonly seen in other countries too. Is this considered respiratory disease?'

However, the diagnosis of laryngeal hemiplegia, a respiratory disease, seems to have nothing to do with my question of evaluating the popularity of respiratory disease. He kept doing the same thing by interrupting my explanation by saying

'Or for example, cold and upper respiratory tract infection are respiratory disease too. It's hard to choose which one.'

However, this still does not get in the way of evaluating the popularity of respiratory disease because all the diseases he mentioned are respiratory disease. He mentioned lots of unnecessary judgement on the purpose of either avoiding topic or showing off his knowledge based on the relationship between what he said and his reasons of saying it which is un-relevant.

Overall, the vet is not friendly nor open to my questions. This is partly due to me in lack of interview experience and the complex emotion that I had before the interview. As a result, he kept giving judgement to my questions which could either due to his personal ego or the possible worry that I would do things against him so that he prefers using attack as defence to hide the fact. Or in my opinion, both. Because in the following part of the interview, although he keeps saying that it is hard to answer my questions, he did answer all the questions in the end, even extra information added. Based on this fact, I tend to think that his judging is just a way of expression to keep himself safe and keep me intimidated. At the main time, the interviewee kept trying to remind the interviewer that he is much more experienced and knowledgeable by criticizing the interviewer's work. Through my analysis, I think the interviewee here is a very proud and self-centred vet who does not want to share much information about himself nor his clinic. I tried to avoid making the analysis personal. But I totally accept the fact that my judgement may have the tendency of criticizing the vet because of the bad experience I have when doing the interview.

The problem this interview can reflect about the veterinary condition of China is the attitude of vet which tend to be self-centred and how this attitude could prevent them from improving their skills. Located in one of Beijing's biggest equine centres with some of the best racehorse in China, this veterinary clinic is in no lack of clients or reputation because there is hardly any vet clinic could compete with it. This condition brings the vet a sense of superiority over others which was showed by his disregards towards academic student like

myself. As I can imagine, since he treated me with very closed attitude and attempt of intimidating, it is highly impossible for him to have an open mind towards other vet students. However, for the overall veterinary medicine skills of China to develop, people inside the industry are required to stick together and have an open mind. Unlike this vet here that generates superiority over others.

4.7.3 Ethical complain and generation gap

The following interview is a riding club (club C) in Beijing focusing on membership and teaching children to ride. The interviewee is the owner and the horse trainer of the club who has no veterinary education background. The club does not have a vet and therefore, relies largely on the equine hospital to insure the health of horses. Therefore, he is in the great position of giving feedback of equine veterinary service in Beijing.

During the interview, the interviewee suggested that there is problem with the vets that needs improvement. 'We are facing the emergency problems' the interviewee said, 'the night time is the most popular time for horses to have emergency problems, especially for 0 am to 4 am. However, during this period, lots of vets don't go out.' The interviewee is a horse trainer and the owner of this riding club. He has been in the industry for a long time and he does spend a lot of time with horse because he is also a rider who still competes. Therefore, what he mentioned here about the vet refusing to go out between 0 to 4 must come from his own experience instead of assuming. He added later 'there are always lots of people in China. It's also because that we are not as good as the west. The money is not the thing to consider in my view. I would spend money if the horse is still treatable.' The interviewee seems emotional here which showed that he might have bad experience about that. I was a little shocked by this information and also feel very lucky to get it because if I interviewed a vet in the clinic, I would not get such shocking information because they won't expose that to me for sure. It is a truthful feedback.

As a former vet student in China, I did learn veterinary medicine in college. But I have not had a chance to practise that in any working place in China since I went to UK right after graduation. Therefore, most of the equine practise I've done is outside of China and I did not know much about the veterinary industry in China. Hearing this information is very shocking to me. However, by doing that, the vets show no responsible towards the life and wellbeing of horses which was supposed to be the most important thing for a vet.

After reviewing this shocking fact, the interviewee questioned the ethical practices of vets and pointed out that 'the problem with vets is that the old experienced vets in China are gradually retiring. The younger generation is not very good. They need to learn to be good people and do good things first. Then think about making money. They always talked about money first.' He added 'The things need to be done always come the second. That's what is like now. Because vets are in shortage, if you don't use them, someone else will. They don't care too much about that. It's a very scary thing to think about. In Europe, most people there know something about horses. The resource there is much better.' The interviewee has been a little bit emotional here probably because of former unpleasant experience. He made critical judgement about the new generation vets being too material and concerning too much about making money. Because they are on extreme superiority side due to the general ignorance about horses among the industry. He claimed that most people within the

industry does not know much about horses, which has boosted the arrogance of vet because they are too desperately in need. This fact can get in the way of the improvement of general veterinary skills within the industry. For example, if most people within the industry know how to resolve the common health disease of horses, vet won't feel superiority about the commonly seen disease, therefore, they would put their attention more on the improvement of their skill.

The interviewer's words also reflected a general problem of the industry; the discontinuous veterinary resources of the industry and the generation gap between them. The equine industry in China is very new. Although the traditional Chinese keep horses as livestock for farm or transport. The modern equine industry is very different from the traditional one. The same thing applies to the veterinary industry which includes the value and principles. The vet industry has been in lack of attention for years in the past. For the old generation vets, they have had lots of hardness considering the environment that they had to work in the past and the historical turmoil they've experienced, which as a younger generation, me, talking to them, I could feel from their words. With sense of vicissitudes, they became more easily satisfied with life than the younger generation. The word outside of China is unimaginable to them. However, things are totally different with young generation. Their eyes are much more opened than the old generation and something the old generation vets experienced have been taken granted for them. I've personal heart a young vet in Beijing with oversea experience said that if he and his 3 friends from work stopped working, the whole equine veterinary industry in Beijing would be stopped. By hearing that, you must think this vet is just being arrogant, however, in my opinion, it is the current situation that make him think that way and he has no control over. What these young vets asked for is beyond imagination for the old generation. Therefore, the interviewee here complained that 'The younger generation vets need to learn to be good people and do good things first. Then think about making money. They always talked about money first'. Because compared to the old generation, their needs are much bigger and more ambitious. Doing the good things for horses is just a part of their goals and once it gets interfered with other goals, it will be neglected.

4.7.4 Unrepresentative but good case

The next interview still locates in Beijing (club D) and it is a very advanced club specialised in competition. They have only 29 horses here and the standard of husbandry here is higher than most clubs in China because the founder of the club is an Olympic competitive rider who learned riding from Germany and tries to adapt his club into the same standard as Germany. Therefore, this club is an example of the highest equine husbandry standard in China. Because the themes of the study were evolved from both the areas from the semi structured interviews as well as the content of the transcript. This case was selected because the result of the interview has suggested the high standard managerial skills this club had. Therefore, this club is not representative but it still worth mentioning. During the interview, I got chance to talk to the vet of the club and asked him about veterinary industry in China.

The vet here is an experienced vet who used to deal with small animals. He was involved in the equine industry only few years ago. Therefore, when he knows the development of

veterinary in both horses and small animals. The latter formed earlier than the former one. He is in the position of giving opinion of the comparison of the two industry. During the interview, he mentioned that:

'The welfare of small animals used to face the same problem, with too much talking and no doing. I think animal welfare means for animals to have good living quality. Good training and arena for horses for example.'

He seems to take animal welfare very seriously and based on the fact of his club which has advanced equipment and good management. They did a good job on the animal welfare and the vet or the club owner here did a good job with regards to equine husbandry. However, this club is not representative and the horse's number here is very small. Consider the reputation of this club among the industry, although it did a good job in taking care of horses, it is not representative in the whole industry.

During this interview, what surprised me is how open and down to earth this vet is. Before I came to the club, based on my former interview experience and the high reputation of this club, I thought the club might not take a student like me seriously. However, to my surprise, the vet takes very huge notice of my research and asked a lot about it. And the whole working atmosphere is in great harmony, which I could kind of tell from the description of the manager and the conversation between them. She mentioned that the staff here is like a family and they have a special chatting group where everyone sent what they noticed about horses everyday and all the staff could see. The vet stay in the stable almost all the time and he has a office inside the stable.

Overall, the vet seemed open and honest to me and the whole interview experience went better than I thought. And he did point out some problems with equine welfare such as that there is too much talking instead of doing and how the welfare of small animals used to face the same problems, which improved as time pass. As a vet student myself, I feel very happy about having him as a predecessor and someone to learn from because he seems to take notice of the problems the industry is having and open about this club. However, the reason behind that may probably be that this club has nothing to lose by telling the truth as this is of the highest management level across China.

4.7.5 Poor facility

The vet I interviewed in race yard 1 is a young vet who has a degree in veterinary medicine and qualification too. She has been in this club right after graduation has been staying there for 8 years so far. She is a full-time vet of the race yard and works mainly with the local horses of the club because the race yard is also opened a riding club which has lots of memberships.

During the interview, she mentioned lots of unsolved cases of diseases of horses. One of them is described as following:

"After a thoroughbred was trained in the morning, the trainer said the horse struggled a lot. But they told me that the day after. By the time I saw the horse, there has been a big bump on his neck. The horse died a few minutes after."

This shows the disconnect between the vet and the rider. When horse seems having trouble, the rider did not report it immediately. Instead, he told the vet the day after, which results in the death of the horse. The rider did not communicate with vet enough, which is another problem within this club.

In general, the vet I interviewed here is a new-generation vet. She graduated in a formal vet college and got the professional certificate later. Horses are the only animal she has worked with. However, during college year, she has little opportunity to work with horses. After graduation, she learned from the basic which including horse handling skills. She is a representative of the new generation vet who learned professionally about veterinary skills at the college and have certification and have worked as an assistant with old-generation vets. She has no trouble understanding academic knowledge and reads the published article regularly, which showed that she is connected to the work with regards to the knowledge. The problem she is facing is lack of practical knowledge because she is not experienced enough dealing with some special cases. She needs guidance from the old-generation from time to time.

The club is composed of two parts. The race track at the front and the stables at the back. For most of the time, the costumers are not allowed to get into the back yard and only the staff of the club could enter. During my interview with this young vet, when asked about the veterinary condition of the club, she mentioned the equipment is not very good and the environment of the office for vet is unsatisfied neither. I was very surprised because the office and the facilities inside the front building are so far the best I had ever seen in China and the trainer that I interviewed sounded very professional and know how to keep horse healthy as well. It is very hard to imagine the vet would say that the equipment is not good. Therefore, I insisted to visit her work place which is next to the stable. She kind of refused because customers and members are not allowed to get inside the stables and she said she didn't want to spoil my impression of the club neither. After my strong insist, she said yes, however, no photos allowed.

Since there is no race around the day I visited. There are only membership horses in the club instead of imported horses. Most horses kept there are local horses. The barns are on the other side of arena and are made of by wood. There are almost 10 barns there with each of them surrounded by trees. Huddled by trees, there are two round pins outside the barns where they lounged horses. Due to the rain the day before, both pins were filled with water which were definitely out of use that day. Inside of each barn, stables were built very



FIGURE 4 STABLES OF R1 (AUTHOR' OWN IMAGE, 2018)

small and I wouldn't even want to call them stables because they looked like the squeeze chutes for cattle only with wilder space. The walls that separated two stables were made of stones that reached up to my waist. The space for each horse inside the stable was a square with the width of one and a half horse's body length. The door for the stable was a metal grill that lied in front of each stable. There was no bedding or very little bedding on the ground for horses. The horses there are mostly local horses

that are from Xingjiang and Mongolia. The horses inside the first barn I visited were the worst with body conditional score 2 or less. The coats of horses were in dim and dreary colours with scars on the body. Most of the horses flapped their ears and turned their hips at me when I got close to their stable doors. Therefore, I did not check closely. The vets lead me to another barn where they kept new Yili horses which I found are healthier looking and friendlier. Through asking questions to the vet alongside my visit. I found that those better-looking horses had just arrived here from Xingjiang. After seeing two of the stone-walled stables, the vet guided me to the third barn which was specially built for imported horses during competition. The stables inside were empty then because there was no race that day. During the racing, they would have the imported horses transferred from other clubs and kept inside this barn. These stables looked much more decent with larger space for each horse. I got allowed to take a photo of that barn. Later the vet mentioned that they currently did not have places to turn out horses. They tried to use the wasted land around them to build an indoor arena last year, however, was witnessed by the drone of government and they had to tear that down. She also pointed to me the ruins behind the back yard where they tried to build the arena.

After seeing all that, I felt extremely sad for the horses. This is one of the biggest race yards in China and I expected it to have great facilities for horses. However, on the contrary, they have the great facilities for people and the worst facilities I've ever seen for horses. The people inside the offices dressed very formal with their great office setting, however, in the area right across the race track, the horses are squeezed inside cubes with poor body condition. I personally have never seen such thing for which, I was extremely astonished and sad. I think the reason behind that is very complicated, but one thing that is for sure is that the people in the high managing level must have no or little attention on how to improve the environment for horses and therefore, they put no effort into it.

4.7.6 Veterinary leadership

The vet of club G is introduced by a friend and I've known him too from the former internship experience. He is very open about sharing his personal information with me because of the former acquaintance. He has been working as a vet since 1986 and this career did not start easy because of the condition back then where there are very few vets among the industry. Farm livestock is where he started the veterinary career and 10 years after that, he turned into horses. He has worked in Beijing and Tianjin and then turned to Qingdao. 30-year-working experience made him sounds vicissitude during the interview. The information that I asked seems be left for years without inquiry. During the interview, he mentioned that the club used to focus on breeding which includes embryo transfer and they have succeeded breeding more than 200 horses so far.

During the interview, he mentioned the 'club culture' multiple times. When asked about the if the feed changed is according to his advice, he replied:

'It changes with advice from all the parts. It's also kind of a culture of the club. The feeding, training and all the others. This culture doesn't just come from one person's experience. It is a result of a gathering of all the good experiences across China. When it comes to how much this club could achieve, it would depend mostly on the club owner. If the owner has very strict and clear rules to follow, the club would be great. You can tell by just walking into the

club. Club G did a good job on that as far as you can tell. It's the company's culture and owner's rules.'

The western riding industry which is the major riding style of this club is limited compared to other styles in China. Most people within the industry get into this area out of interest. They have their own idea about the riding culture. Therefore, the building process of each club is very different. People do it according to their idea of western riding and equine management. This could cause the club culture that the interviewer mentioned. Since he came up with this opinion, I try to dig more information about his idea of the industry by continuing this topic across the club. Asking directly about each club's culture difference is too sensitive because there may be some unspeakable reasons that the interviewer left his old job. Therefore, I started cross club comparing from equine disease and hope he could mention the difference of club culture. Therefore, I continued to ask If there is difference between this club and the clubs he has worked before with regards to the common diseases. He replied:

'I used to be in charge of stable managing and veterinary part in Equuleus. Things were complicated. At that time. The club was just built up. What I say about the club culture is also the club owner's culture. Club owner needs to have a plan about what riding club he wants to build. He needs to hire the right person to do the certain job. Equuleus club was a long-time-ago thing and I think it may not be appropriate talk about it. At the year of 2005, the club was still under construction and the indoor arena has not been built yet. The stable was a mess too. My boss and I tried to improve that.'

The interviewer explained the club culture more detailly by saying it is what the club owner wants the club to become. And he was not willing to talk much about the old job because there might be unspeakable things behind it. But from his talk, we can tell that how much control club owner has over the club itself. Because most people build clubs in China do that out of their own interests. There has not be a formed system behind it and freedom is largely granted to them of club construction. If we want something to change within the whole industry, club owners should be the first group of people to turn to. That can be connected to the 'club culture' the interviewee mentioned.

Besides that, the interviewee also mentioned that he used to be in charge of both stable managing and veterinary in the Equuleus club. Equuleus club is the only club in China that qualified by British Horse Authority. It has high standard of equine husbandry skill which is similar as UK. But as we can tell from interviewer's talk, the club used to be just like others with one person in charge of two or more jobs. But it got developed into today's standard managing. This reflect the general pattern of development of the riding club.

In the following interview, I also asked for his opinion about Chinese traditional veterinary medicine. His answer is as follow:

'The vets in China need to know everything. They are forced to know everything. For instance, if you are the only vet of the club and there is one horse with diseases that you cannot treat. You still have to treat it using whatever you can think of. If one way is not working, you will change into another. You will use all the methods you can think of to treat it. The acupuncture skill is learned this way. You know that we don't do much practise when

we are learning it in the school. But we use it a lot in work. So you need to learn that by yourself. The injuries related to back, leg and muscle would need acupuncture for treatment. There is no better way than acupuncture. For example, during the exam to join the Olympic team, I wrote down using ear needle to treat intestinal stuck. The foreigners were very curious and asked me what that is. I said to stimulate the ear nerve for treatment promote the intestinal movement.

His answer in some way can reflect the whole equine veterinary industry now because of his experienced career and significance of this club across the country (this is one of the largest clubs across the country and has a close relationship with a professional equine college too). The conclusion of the problems he reflected is that the number of vets currently is far away from enough and that the veterinary medicine teaching in school is not very practical. Skills such as acupuncture are not learnt in school according the interviewee which you need to use a lot when you come to the work place. Most vets are forced to monitoring variety of skills after they went the work place. The older vets such as the interviewee himself learnt most skills by himself because they do not have more experienced vet to learn from at that time. As for the Chinese traditional medicine skills, they turned to that when there is no way to deal with certain disease among western medicine.

4.7.7 Diagnosis difference and equipment limitation

It is an equine centre (race yard 2) located in Mongolia where Mongolian equine culture is based on. There are more than 2500 horses in this equine centre. The place owns an equine

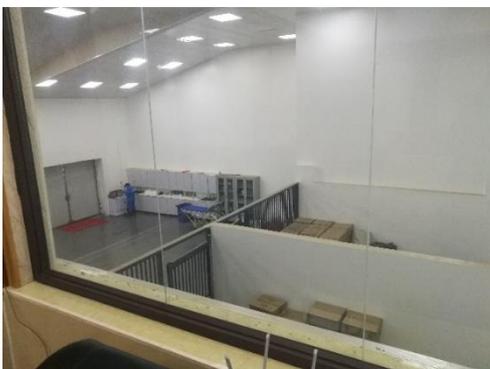


FIGURE 5: SICK HORSES' STABLES OF R2 (AUTHOR'S OWN IMAGE, 2018)



FIGURE 6: OPERATIONAL ROOM OF R2 (AUTHOR'S OWN IMAGE, 2018)



FIGURE 7: FILE ROOM OF R2 (AUTHOR'S OWN IMAGE, 2018)

hospital and I interviewed the leading vet and had tour of the hospital.

The hospital seemed to have good facilities. However, these facilities didn't seem to be used much. As it showed in the photos, the stables designed for sick horses under supervision were piled with boxes and there was no horse.

The vet here used to work in Beijing and he came to this place in 2012 when the company was expanded. The club started to breed horses in 2006 and continue to do it nowadays. When asked about the difficulty of horse breeding he replied:

'I think if you set up the right standard in the first place, I think there won't be any problem. How can it be difficult? I don't think there will be any. All the related equipment was well-developed when we first started it. We were lucky and there seems to be no significant difficulty with that part. The pregnancy rate is not very high. What we will do is learn from the west. What I mean by learning is mostly the idea of the west.'

The interviewee was arguing the breeding should not be difficult in China with the 'right standard'. However, based on my experience and understanding, there are lots of difficulties of breeding horses in China. Very few people know how to do that and most of them are not very experienced. For instance, an alumnus of mine is currently the only person who is operating horse breeding in a riding club with only 7-8 years of experience of working with horses. It is impossible that 'there won't be any difficulty' as the interviewee suggested, followed by a rhetorical question 'how can it be difficult'. It is possible that he was trying to hide the fact. Then I continued to ask for more detail about the ideas he mentioned. Then he gave an example about veterinary practise as following:

'The veterinary part. It's just like when we are going to the doctor. Horses need to go to the vets too. There are differences between east and west and there is a lot of things we need to learn from them. The most important part seems to be the diagnosis of disease. What we are doing in China can be described as trying on the medicine. If we put it in a bad describing way, it is just like therapeutic diagnosis. It means you treat the disease first with one type of medicine. If horses do not get well, we try another one. Even doctors are doing it today, let alone the vets. But the idea that we try to learn from the west is diagnosis treatment. It means we get an idea of what disease horse is suffering before actually treating it. Another part is the way of doing it. In my opinion, the veterinary industry in China is very loose. There hasn't be a system yet. It is very important. For example, three vets have three different equipment. There is a disease on horse that need all the three equipment. But because the industry in China is too loose. We cannot achieve that. We should make it systematic. It was done very well in other countries.'

The interviewer mentioned the difference between therapeutic diagnosis and diagnosis treatment. The former one is used widely in China and the latter is used in the west. To turn from the former to latter is what need to be learned from the west. It is a very shocking news for a former veterinary student, myself, because it is totally different from what we've learned in school. The whole idea sounds logically wrong and the way he described it is like telling a joke of which he took a part. I have no doubt about credibility of this fact since he has been in the industry long enough to make this judgement. Besides that, this concept is too shocking to be unreal because it is highly impossible to be made up. He is now working in one of the best equine hospital in China and he is obviously an experienced vet because of his position. However, this comment is very much against the ethic of veterinary medicine. The big problem is showed here about the attitude of vet. They don't take the diagnosis seriously due to the lack of rule based on that. As the interviewee described later that the whole veterinary industry in China is very loose and there has not been a formed system, which could imply the vets can generally do whatever they what without being judged. Combined with the ignorance of horses across the industry, they can dominant the wellbeing of horses depends on their moral ethical. It is a very dangerous thing to think

about with only one group of people deciding the wellbeing of horses because they can easily divide the 'profit cake' unevenly in order for them to keep the larger piece.

The other issue the interviewee mentioned is about the veterinary equipment. Unlike other countries, the veterinary industry in China is very loose with different kinds of treating equipment spreading around in different equine hospital which makes the systematic treatment harder when certain disease needs variety of equipment. This reflect another problem caused by unsystematic industry.

4.8 Chinese traditional medicine

Chinese traditional medicine is an important part of equine veterinary industry according to a lot of vet, and they even suggested that it used to be of wider use compared to western medicine in China. And I collected people's opinions towards it by asking them about the popularity of Chinese traditional veterinary medicine within the industry.

4.8.1 Negative opinion

'I think the whole Chinese traditional medicine including veterinary has been left undeveloped nowadays. It was judged a lot during recent years. Chinese traditional medicine used to be very common and popular, especially in the countryside where vets tend to have poor education. The knowledge they have comes from experience, especially with Chinese traditional medicine. Chinese medicine alone could treat all kinds of equine disease. But with the development of western medicine nowadays, it became less dominant with its limited value showing on acupuncture and patient medicine. The funny thing is that it's getting even more popular in Japan and Korea. In china, the use of Chinese traditional medicine mainly concentrates on disease prevention'

The club D's vet answered the question based on his own experience as a country vet. He was not academia which can be seen at the beginning of the interview that he had trouble understanding the questionnaires. The club he worked in, however, was focusing on He confronted his own shortage of coming from countryside and was poorly educated. This situation was one of the factors that caused this technique being left behind. On the other hand, he suggested that the traditional skills became more popular in other countries because of the advanced equine industry there. The overall attitude he had towards the industry was negative.

4.8.2 Positive opinion

The attitude became different when it comes to club E where the vet claimed to be the first person to mix Chinese traditional medicine with western veterinary medicine. He suggested that they were able to treat diseases that were considered untreatable in western medicine. When asked about his thought towards its development in other countries, he replied:

'I think it doesn't develop well in other countries. The Chinese traditional medicine is different between what it is in China and in other countries. Rules such as Yin and Yang or the five elements are hard to understand for them'

Unlike the first vet, the vet obviously had a very positive attitude towards the development of Chinese traditional medicine in China. Because the basic theory of it is very hard for other

countries to understand and I agreed with him on that. Because the traditional Chinese medicine's theory is closely linked to Chinese culture and most medicine books were written in ancient Chinese language. It's hard to understand for native Chinese vets even being translated into modern expression. The vet sounded very confident and proud when it comes to the traditional medicine topic. Then he gave some examples with regards to treating horses using traditional Chinese medicine:

'We have lots of methods to fix one problem. For example, we have a horse here yesterday with back pain. We have almost 200 cases with back pain that are all 100% cured. We can fix them all. This problem is very popular in other countries too. They have massage too to relieve pain. But they still need to inject painkiller. We don't need to do that. We use herb with ion transfer to put on their back. If it's cured, it will be almost impossible to come back. And horses' performance could have improvement as well. For example, if they take 1:01 min to finish 1000 meters before treatment, an improvement into 59 second will be made after the treatment. Riders can feel it on the horseback too. If horses are with back pain, they are not willing to change lead at the turn because it stretches the pain muscle which adds the pain. The horse that have pain on both sides could do straight running. I once encountered an imported horse in Yunnan. They spent lots of money on that horse. The horse with a small pain area on his back which was not noticed by the owner and they still gallop him a lot. One day, during a track turn, the horse lost his strength and broke his head leg. After keeping him for a year, they finally came to a decision of putting that horse down. Therefore, backpain is a big problem, even for jumping horses. Horses cannot rise high with back pain. It's same to people. You need to think of horses as human when treating them'

According to his description, backpain is the major health problem horses were facing. However, the causes for that were not mentioned at all. Backpain mostly happens due to unfit saddle or wrong training method which should be focused on prevention. On the other words, it should not be the major problem horses were facing if everything is done correct with the prevention. If backpain happens a lot within the club, there must be something wrong with equipment or husbandry. However, instead of complaining the mistake others made about training or tacking, the vet focused on the treatment and he was extremely proud of it by suggesting the curing rate. This statement came up without any evidence. The example he mentioned about the horse in Yun nan suggested that backpain can be so severe that it could result in death. This information seems off the topic from my question. All these could indicate that his lack of knowledge or intension to advertise his clinic. In the following interview, since he mentioned message in Chinese traditional medicine, I tried to explore his knowledge about it by asking which parts of body eastern message is focusing on and if it was bone or muscle, he replied:

'The bone and muscle message are both very impressive in traditional medicine. Take people as example because horses are hard to describe. When people injured his bone. They will treat him with iron nail. But with Chinese traditional medicine, we will put cream on wound and fix the problem by that. Laminitis is very hard to fix in the west. Founder is extremely difficult to deal with. I've treated 4 horses with founder. We cured about 90% of those. They could still exercise as usual. There is a university in Europe that studies laminitis specifically and even they couldn't do anything with that'

The interviewer did not give much information about the treatment on horses. When he talked about the Chinese traditional massage, he only mentioned what it is like on human and he did not mention how it's allied on horses. Based on the fact this is one of the best equine hospitals specialized on Chinese traditional medicine and it's supposed to have the best technique of Chinese traditional Equine medicine cross the country, the application of traditional medicine on horses is still under developed compared to human medicine. He mentioned that he could cure 90% of horses that have founder. Even if Chinese traditional medicine could have some treatment effect on founder, 90% curing rate seems a highly impossible statement. The vet was giving a rather egotistical comment.

4.8.3 Neutral opinion

For other vets that were more practical in their responses, the answer was more practical. When asked about the popularity of Chinese traditional veterinary medicine in modern equine industry, the vet of club G replied:

'Yes (it was very popular). But vets need to have good skills. I suggested all the vets no matter what age they are to learn it more. Especially young vets. I told them that they had higher education than me and suggested them to learn more about Chinese traditional medicine instead of leaving it away. We need to pass it on. Nowadays, the acupuncture in the west is even better than China. That is too unreasonable. I've been trying to tell my students to combine them together. Eastern medicine cannot fix everything. Neither do western medicine. But we can combine them together and use them flexibly. For some case, Chinese traditional medicine could must be involved such as facial nerve anaesthetic. Acupoint injection works better for treating joint problem. Chinese medicine can fix lots of problems. The reason that you cannot do it is simple because you haven't learned enough. In ancient China, there is no western medicine, everything can be fixed by traditional medicine. For example, I used to bloodletting endurance horses that passed away on the field. The west medicine suggested you can only do transfusion after the race and the westerners are surprised to see me do that. But in Chinese medicine, you need to run blood as quickly as you can when you have intestinal stuck. The main conflict western medicine has with eastern medicine is that they won't be able to understand it. The basic rules are totally different'

The interviewee seemed worried when talking about the Chinese traditional medicine. He mentioned that this skill needs to be developed much more appropriate. Especially for the younger generation. As for acupuncture, western has better skills than China now and this is unreasonable to China. But there are things that western won't understand about Chinese traditional medicine because it comes from Chinese culture. The interviewer mentioned an example of treating falling horse during racing. The principle of its treatment sounds unreasonable to the west. From his talk, we can tell the current situation of the Chinese traditional medicine in equine industry now. It is currently widely used by vets, however, it cannot effectively treat the disease alone due to the lack of modernization. A combination of eastern and western medicine is needed.

Based on my lived experience, I perceived Chinese medicine as not only a way to treat animals, but also a culture that lies under every Chinese people's veins. I think it has a great potential in the future because it already has thousands of years of practise in China.

However, with western medicine and other advanced clinical technology being imported into China, Chinese traditional medicine is no longer the same as it used to be. People who may not be very professional are using it as a tool to make money and the reputation of Chinese traditional medicine is affected internationally. However, as a Chinese student who has learnt both the eastern and western medicine, I'm confident to say that there are strong theories behind both of them and I hope Chinese traditional medicine should be equally developed in the future. Through this research, my wish to study veterinary become stronger and it provided me with great mental support for my future study as a vet student.

4.9 Equine welfare

4.9.1 Background:

In China, the equine industry is facing a great development during recent years. And the equine welfare issue became popular during recent years and it became the main topic for the China horse Fair 2018 (CHF, 2018) which contained people from all over the industry including horse breeders, horse trainers, vets, horse owners, riders, horse competition costumes, horse feed & nutritious, animal welfare and rehabilitation facilities workers, publications related to horses and so on. The aim of this fair this year is to reinforce the equine welfare and help Chinese equine people to develop a better understanding of welfare and learn how to conduct it. However, in the academic part, the equine welfare in China still remain silence. Even though there did have been some articles talking about animal welfare in China such as Animal welfare law (Jiwen, 2006) and Animal protection and welfare (Tongjie, 2008). However, the focus point of these articles still remained in farm livestock. Horse as a competitive and leisure animal was fairly mentioned. In 2014, a book called Animal Welfare was published with the help from Chinese Veterinary Medical Association. The book focus on the welfare of all kinds of animals and is dedicated to making animal welfare an integral part of the academic curriculum across China. The book has an independent section talking about equine welfare with suggested welfare rules translating from the English version. However, the Chinese equine industry has its unique states because of the traditional culture and special composition which separate it from others. The problem we are facing with equine welfare may be different from other countries.

I interviewed people within the industry of 4 major parts of China and I would like to share this personal experience and their opinions about equine welfare. The goal is to get people's truthful opinion towards equine welfare and through this, to find a practical way of improving the equine welfare in China.

4.9.2 Land limitation

During the interview of the club B owner, I tried to ask for his welfare opinion by asking his opinion of the importance of horses' health. He replied:

'It is very important. The health of horses includes their physical and mental health. The physical part includes the riding. The stability of horses depends on the riding to avoid tripping and to keep the balance of people. It also includes ensuring the health condition of competitive horse before the competition. The mental health of horses includes the way of treating horses. You need to consider the mood of horses too. Feeding, drinking, resting and fatigue are all related to the mood and mental health of horses. You can only get rewarded

if the horses have great mental condition daily. It's just like it's been described in the book. Horses are like dogs and they have similarities. But dogs are bold and like to play more. Horses are timid and sensitive.'

The interesting thing during this interview was that during most of the former questions, he had never given long answers like this one. He did not seem to want to talk much. However, to answer this question, he talked much longer than I expected. He mentioned both physical and mental health. The physical part mainly focuses on avoiding the accident and get good score during competition, which are linked to the benefits of the club. The mental health is connected to the husbandry. Good husbandry keeps horses mentally healthy. I was surprised by his long answer and later after the recording, he told me that there has been people from equine organisation came to club to ask for the similar thing each year. The information they were asking was pretty similar to me. Therefore, he was kind of prepared.

In the following part, I tried to dig up more details by asking for the measure they were taking daily to ensure the health of horses. He replied:

'You know our club is one of the few clubs that can take good care of horses. Especially with a larger number of horses than other clubs. With teaching horses. 3-4 classes working hours are reasonable. But other clubs may work the horses for 8 classes without resting. In that way, the mental and physical health condition are becoming worse and worse.'

Considered he mentioned that the club has around 1500 memberships and they only have 80 horses inside the club. Each member will need to at least come to the club once a month. His statement about limiting the working hours of horses is debatable. Because with his statement of keeping 1500 memberships with 80 horses in the club. it is highly doubtful that he only works 3.-4 hours each day with each horse. However, this idea came to me after the interview finished. I didn't ask him then about this doubt. He kept say:

'Limiting working hour is just a small part. The feeding of the clubs is very standard according to their exercise and height. We don't feed randomly when it comes to local horses neither. You feed all the horses what they are supposed eat. Because there is no difference in feeding, the quality of hay needs to be ensured. You need to feed enough hay to every horse just as if they are under the natural environment. If you feed twice instead of 4 time a day just to save money, it won't be a good thing.'

He keeps suggesting how standard the husbandry here was and this club was one of the few clubs of the country that take good care of horses. The extra information that he gave was trying to emphasize how much he cared about the health of horses. The attitude he has here changed from what he has at the beginning of the interview. He obviously talked more and added extra information when answering questions related to the health of horses.

The plan of my interview went okay so far. To get more opinions of equine welfare instead of asking directly, I added the question of how to deal with horses that are at disadvantage such as disabled horses or old horses in his club and hoped he would add his opinion on that. Then he pointed out 'the disadvantage of Chinese equine industry now is that we do not have place for old horses.' He added 'for injured and sick horses, you can rest them and we do have vet in the clubs who makes it easier. But for old horses, there are ways to arrange them, however, they remine unachievable for now.' When asked about the reason,

he added 'because we do not have space and place for them. A field in Beijing costs too much and there is an obvious shortage. Even the waste land cannot be used without permission. If we have spare land, old horses could survive there with only grazing. It is also a respect towards life.' 'We tried to do our best at that point. Our club have been keeping two old retired horses whose age are around 20. We tried to give them as much care as we can.' He later added 'the condition of grazing and staff number is not ideal either'.

The problem of land limitation has been no stranger to China. This club is located not in the downtown centre. It's near the airport with free field around them. But as he suggested, they are not allowed to use the field without permission. The vet of the club mentioned the same problem too and added 'it's been said that even the best stables were prisons for horses. In other countries, the stables they have may not be the best. But horses can be kept outside for more than 10 hours a day' (the club owner and the vet were interviewed separately). This suggested that they might have tried to use the spare land before, however, did not success.

The interview with the vet mainly focused on the welfare rules related to the treatment. The vet suggested that there were welfare rules to follow when treating horses and horses should always come first. However, the original of those rules was unclear to him and as far as he knows, the rules came from the world equine veterinary conference or some other international organisations. When asked if he think the rules are specific enough, he replied 'it differs with people and locations' he added 'the rules are written very detailed, however, the daily apply is a different thing.' And he suggested that 'the rules need to be more realistic and should differ with clubs. For example, in Beijing, it is not possible for horses to have enough space and be kept outside.'

In general, the club owner focus on the health of horses mainly from the benefit perspective. Emotionally, he respects horses and thinks that horses desire a good retired life when they are old. And although he did not mention the word 'welfare', he has a general understanding of how to keep horses healthy which is what they are trying hard to do. The vet of the club suggested that the equine welfare rules that we currently have are not practical enough and they should differ with locations. And they both suggested the problem of lacking free land for keeping old horses in Beijing.

4.9.3 Lack of restriction

Club A owner was interviewed in Beijing. The club focus on membership and riding. When asked about the importance of the health of horses, he suggested 'I think from the welfare part. This is the first thing to consider. It is not humanism to work unhealthy horse.' When asked about how to ensure the health of horses when it comes to the daily care, he replied: 'We tend to get very busy during weekend and lots of lessons will be organized, the schedules of all the trainer are all packed with classes. We will keep an eye on the equipment of horses to see if they are comfortable. On the other hand, I think our club did a great job of ensuring the feeding and shoeing. We will always keep an eye on horses' condition, to see if they are able to work and if they are health. Our riders will do that too. But for more detailed and quantitative part, we will still need to learn.'

When asked about the old and disabled horses, the club owner suggested the problem of lacking restriction for dead horses.

‘The club is very newly-built and we haven’t encountered the imported horses’ death yet. Local horses died of illness before. But there hasn’t been a standard way to deal with that in China yet. There is no restriction for that neither. Therefore, with local horses, we usually deal with the body ourselves. We certainly won’t sell it that’s for sure.’

In UK, when horses are suffering from notifiable disease, local Animal Health Office must be contacted. If a horse dies or has to be put down on premises, the owner will need to arrange the disposal under animal by-products (ABPs) controls. (DEFRA, 2017). Then it will be treated under certain procedure. However, there has not been a formal procedure in China yet.

4.9.4 Lack of action

The interviewee conducted next was in club D with only 29 imported horses used for international competition. The facility here is therefore more advanced and husbandry has been placed special attention. The club had a vet and I collected some welfare opinions from him. When asked if he had welfare guidelines to follow when treating horses, he replied:

‘Yes, we do. But I think equine welfare is not just something you talked about. I think most people just talk without doing anything. For example, we have a horse aged 19 years old who cannot join the competition anymore. We still treat him nicely. I think Respect is another part (of welfare). This horse won a lot and he got a proper retirement few years ago. I think that is welfare which is what horses will do after the retirement. We had an idea of finding a place in Mongolia for retired horses who should live naturally. I think that would be the best thing we could do for equine welfare.’

The problem of the lack of land for retired old horses was mentioned in the previous interviews as well. The idea of using land in Mongolia sounds a possible solution. However, moving and keeping imported horses in Mongolia is a big job with lots of money and staff needed. It needs support from lots of areas and they cannot be achieved by themselves. However, from his words, he seemed to really care and respect horses. He also added ‘I think animal welfare is to have good living quality. Horses with good training and arena’ and gave out suggestions for improvement:

‘(The improvement should be) to do more instead of just saying. It also depends on if you love horses or not. Keeping horses for most clubs now is just a life style and lots of people do that just because it’s popular. I think Hong Kong Jockey does a great job on that. Partly because they have money come back to them after the racing. They do a great job with the equipment, feeding and supplement. They are richer than mainland China. It is not just about people’s mind. It’s also about reality.’

The interviewee took equine welfare importantly and mentioned that the problem the industry is facing now is that most people were talking instead of doing. There are lots of lectures related to equine welfare offered by different equine organizations, however, the reality is not as good. Actions need to be taken besides saying. And shortage of funds to do

that is another problem too. Unlike Hong Kong, the racing in China does make lots of money. And according to the race yard I've visited both inside and outside China. The facilities for people are equally good with the modern office building Wuhan race yard has which is just as good as the race yard I visited in Kentucky. However, consider the fact that the race industry in China does not make as much money as the west, the spend on horses must be largely deducted compared to the west. That is the reason why the race yard in Wuhan has very bad facilities for horses. Therefore, to improve the welfare for horses, money need to be spent equally on both human and horses. Or at least spent a little more than how much they are spending now.

4.9.5 Lack of awareness

When asked the vet of club E if there are rules to follow during treatment, he replied:

'About the question of if we have guidelines to follow during treatment. It is not appropriate to say no. But if we say we do, we don't take it importantly.'

When asked if he has suggestion of how of improving equine welfare in China, he replied:

'About the question of asking if I the suggestions, my answer is that I think their rules are very detailed. We can just copy what they have. They think more detailed than us. We mainly think of the treatment of horses. We have very few rules here related to equine welfare.'

The attitude interviewer has towards equine welfare is very vague. 'We mainly think of the treatment of horses. We have very few rules related to welfare' showed that the interviewer thinks that equine welfare does not have much connection to veterinary. Vets should mainly care about the treatment, it's not his responsibility as a leading vet of the clinic to worry about welfare. Then, I tried to ask for an example of 'their' detailed welfare rules, he replied:

'If a horse is lame, once we check where the problem is. We have lots of equipment to help diagnosis. X-ray will be used if there is problem with bones and joints. Ultrasound will be used if there is problem with tendons. Depend on the diagnosis result, we will come out with the treatment. For example, stethoscope will be used to diagnosis the courses of stomach ache. We can tell the general location by looking at clinical signs. They show a lot with clinical signs. Such as if horses have mild pain, they would flip the muzzle and look back at their stomach. The side which he is looking at is the side where his pain comes from. The stench of leg shows different pain as well. If they lower the head, their pain is in the down side. Some would kick their stomachs. By observing that, we could tell the general location of pain. Stethoscope will be used afterwards to check the problem. It is not easy to tell, but you can if you are experienced enough.'

My question was asking for the detail information related to welfare, however, the interviewee's answer has very little connection to equine welfare, which indicated that he was extremely ignorant about equine welfare and just as he said: 'don't take it importantly'. In his opinion, vets should only focus on the treatment of disease and leave the 'welfare' thinking to others. He suggested clearly that it should be others' duty to take notice of the welfare of horses, however, when asking about what 'others' did to ensure welfare, he

exposed his ignorance even more with lots of in-relevant examples. He obviously does not have the concept of equine welfare in his mind and being totally blank about equine welfare. This is very shocking for a leading vet of an equine hospital to think that way.

In 2014, Animal Welfare was published in China which hope to be an integral part of academic curriculum across the country. The organization behind it is Chinese Veterinary Medical Association and as it was said in the introduction 'vets should be the major force to push the equine welfare forward and it is there duty too'. However, the interviewee who is a major vet of a well-known equine hospital in Beijing showed completely no knowledge of that by saying that it is 'other's' job to care about equine welfare instead of him. And when asked about the details related to welfare, he exposed his large ignorance towards the concept. This interview reflected the big gap between the industry when it comes to the generalization of the equine welfare and the unclear duty allocation related. I interviewed 11 clubs in total with only two of them include equine hospital inside the club. In other words, this vet here is one of the two vets that I interviewed who were considered full-time professional hospital vets. The other one is in Mongolian which I have discussed in the veterinary condition part. Both of them have very poor understanding of equine welfare. Plus the fact that my contacts were very limited, all the clubs that I interviewed were well-known with their names across the country because otherwise, as an outsider myself, I wouldn't even be able to know them and get in touch. Therefore, I think the problems reflected through these two interviews were not random and were representative cross the whole industry. And as a former Chinese vet student myself who have absolutely no idea about Chinese equine welfare before, have the reasons to believe that there is serious problem of the equine welfare in China. I personally felt very bad to say it but I was shocked throughout the interview. Because before returning to China to do this, I did lots of online browsing about equine industry in China and all that I saw then were good news and encouraging improvement. Especially the equine welfare which even became the major topic for the China Horse Fair 2018. However, the reality is not good as it's reflected in the interview.

In conclusion, this interview reflected the general ignorance of equine welfare across the professional vet group. This ignorance does not come from their professional knowledge, however, come from their attitudes. Their focus has never been on the equine welfare even with all the lectures from CHF or other international equine groups. Other means need to be taken and something need to be done from their perspective which should include assigning the duty to person and link this duty to certain reward or punishment.

4.10 Summary

So far, the thesis has outlined my overall experience of reviewing the Chinese equine welfare industry including the importation condition, feeding and stable design, training plan, body condition score system's usage, fitness level and environmental adaptation, abnormal behaviours, veterinary condition, Chinese traditional medicine and equine welfare. Relevant literatures were reviewed as well. During this process, I found that there were some gaps of both knowledge and policy when comparing Eastern and Western industry. Therefore, in the following chapter, possible future plans and recommendations will be listed in order to help to improve the situation.

Chapter 5 Future

5.1 Importation

- lack of complete systematic knowledge of horse selection
- lack of coordination between clubs
- industry too beneficial-oriented

There has not been a complete system to help horse owners to select horses for importation in China. Riding club such as club A, B and C import horses according to their own standards including business aspect, riders' aspect and horse training. Thoroughbred imported for racing yard tends to be more formal. Horse selecting for riding clubs, however, needs to be improved. Instead of competing against each other, different riding clubs should build up cooperation. A combination between business management and equine knowledge should be made during selection. The system could copy UK's horse importing system with the professional dealers in charge of horse importation. They are highly respected within the industry and they have knowledge about horse selection and training. Not only are they in charge of selecting the proper horses to import, they would also keep the imported horses and find out what certain horse is capable of. When the club owners or individuals want to buy horses, they would come to the dealers and pick the right horses with the dealer's help. This system would enable the people without much knowledge about horses to get the horse they want. With horse ownership becoming more and more popular in China, horse dealers are desperately needed. Unlike the current importing agency in China, the horse dealers are more professional and capable of selecting horses for all kinds of event. They should have their own places for horse keeping and training. Instead of contacting of travelling to other countries, people who want to buy imported horse would contact the dealers and the dealers would provide them with the try-out riding service to help them to decide which horse to buy. Besides that, they could help the horse owner to have a clear understanding of horse husbandry and training. Horse owners could ask for their advice on the feeding plan and the training plan. These are crucial for the imported horses' welfare.

5.2 Isolation

- poor veterinary standardization practice in the isolation box
- poor quality forage in the isolation box
- stress

The isolation box needs veterinary standardization improvement such as enforcing sterilization. According to the vet of club D, the isolation box is not operated properly. Besides that, horses should be provided enough forage and water during isolation. Proper exercise plan is also necessary. It has been suggested by several club that the feeding and exercise is not good inside the isolation box and therefore, should be paid more attention to. Suitable exercise plan should be developed for the horses under isolation. Not only does it help to maintain the health of imported horses, it also makes the climate adaptation easier for horses. Nutritious feeding is crucial and continues availability of clean water is important. Because the husbandry imported horses have during the isolation has a great influence on the horses' performance quality and health condition. Therefore, these should be included in the equine welfare.

Besides that, the management of horse during isolation should focusing more on reducing stress for horses. It's been reflected that horses faced severe stress during and after importation by stopping eating and drinking. Therefore, the isolation box management should take this problem seriously. Some people think that it happens because of the novel handler. A study related was conducted in 2018 to investigate the influence of human-horse bond on stress and behaviour and the result suggested that the bond is not important for effective handling and successful coping (Ijichi et al., 2018). This suggested that the different handler is no longer the excuses for stress as long as they modified behaviour under potential stressful circumstances. To help horse coping with stress, DeStress nutritional therapy could be considered (Butterfield et al, 2018) and it's been suggested that providing DeStress to horses before transportation reduced the thermal response to stress. Lavender aromatherapy's usage of relieve stress for horses was studied in 2017 and the result suggested that it could significantly reduce the cortisol (indicator of stress) level in trailered horses (Heitman, 2017).

5.3 Feeding and stable design

- monotonous imported feed option
- local forage's poor quality
- limited choices for bedding material

The horse feed has changed a lot during recent years. Mixed feed used to be the only option since there is no concentrate feed for horses. Things changed with the importation of feed from other countries which started in 2009. However, the choice is still very limited with Red Mill being the most dominant one. This change on the other hand, led the development of local concentrate feed production which was trying to copy the recipe of Red Mill. This is becoming a trend within the industry. Foreign feed importing is at the beginning stage and there has not been lots of options provided. The same applies to local concentrate feed production. Therefore, more foreign feed companies are suggested to export feed into China and more feed company could be opened inside China as well.

Besides that, the local forage is reported to have poor quality by club D, therefore, should be carefully selected and tested. Forage nutrition analysis is suggested for every club. And this test is currently available mostly in universities and is suggested to be developed widely. The test provided in university is not detailed enough neither with crucial testers such as fibre, energy and carbohydrates missing. Accurate nutrient determination requires a lab with standard nutrition analysis including dry matter, digestible energy, relative feed value, acid detergent, fibre neutral detergent fibre, non-soluble carbohydrates, crude protein, crude fat and minerals. Studies related should be developed for the feed development.

Feeding time should be at least twice a day and horses should have access to forage all the time. Cities such as Wuhan tends to be very hot in summer. Feeding in the heat is suggested to provide horses with higher fat diets. And enough water and electrolyte supplementation is important. During the interview, the local horses were reported to have different treatment from imported horses. Therefore, the welfare of those horses is not included here because the problem of them is more severe.

Bedding material is limited in China, especially shaving. Instead, straw is suggested to use for horses in order to avoid abnormal behaviours. It is more accessible than shaving. Straw bedding has been proven to be able to reduce undesirable behaviours and is good for stable air quality too. A study conducted in 2018 suggested that the use of straw resulted in the lowest concentration of airborne particulate matter compared to shavings, STREUfex, and Woody Pet (Nazarenko et al, 2018). Besides that, the behaviour of horse can also be influenced by bedding and it has been suggested that compared to peat moss with shaving and crushed wood pellets bedding, the application of straw bedding led to significant longer duration and high frequency of occupation with bedding and, in turn, shorter fraction of standing. Therefore, undesired behaviours appeared the least frequently (Kwiatkowska et al, 2016). Another study was conducted to analysis different bedding material (wheat straw, wood shavings, hemp shives, linen shives, wheat straw pellets, and paper cuttings) used for horse stables with regards to ammonia generation. The results suggested that straw pellets are most suitable for horse stables, not only to improve air quality by also, first and foremost, in relation to ammonia binding and ammonia transformation within the bedding material, respectively. The disadvantage of this bedding is the high substrate temperature could favour the growth of pathologic germs (Fleming et al, 2008).

The stable designs other than bedding types such as horse number and whether horses could get contact with each other have influence on the abnormal behaviours of horses. A study was conducted by Mcgreevy and his co-workers to investigate management factors associated with stereotypic and redirected behaviour. The results suggested that the risk of horse performing abnormal behaviour increased when the total number of horses in the yard was fewer than 75 and in association with box design that minimised contact between neighbouring horses (Mcgreevy et al, 1995). The further study was done in 2007 to investigate the possible influence of neighbours on stereotypic behaviour in horses and the result suggested that exposure to a stereotypic neighbour is a significant risk factor for performing stereotypy. Also, aggressive behaviour towards other horses increased the odds of stereotypy in the aggressor (Nagy et al, 2008). Therefore, stereotypy horses' stables should not have any direct contact with normal horses' stables and the number of horses in a yard should be more than 75. These should all be considered when designing the stables. This is a part of improve the equine welfare system in China.

The climate in China varies between cities. In cities like Wuhan, the stable design needs to enforce the ventilation because of the hot and humid climate. Whereas in Mongolia where the temperature could drop to minus 30 degree in winter, keeping the stable warm should be the main thing to be considered in stable design. R2 did a good job on that. Located in Inner Mongolia where the temperature is very cold in winter, it's important for R2 to have good stable design to ensure the horses' health. In order to do that, the stables were built with lower roof which helps to keep horses warm in the winter. The window of each stable is very small too, which is specially designed for the special weather of Mongolia. The woods inside the stable was specially build for cold weather. Therefore, the temperature inside the stable could maintain 5-6 degree in winter. The '回' shaped aisle design inside the stable enables horse to be led walking inside the barns instead of exercising outdoors in the winter. This stable design should be adapted by clubs located in northern areas in China in order to ensure the welfare of horses.

5.4 Training:

- land limitation and turnout limitation
- solitary turnout
- lack of knowledge or faculty for training imported horses

All stabled horses, apart from those on box rest for veterinary reasons, will benefit from daily turnout in the field to allow them to graze and socialise with other horse. If turnout is not feasible, stabled horses should receive appropriate exercise daily, unless contrary to veterinary advice (DEFRA, 2013). In China, due to the limitation of land, forced exercise, horse walkers and treadmill are replacing the turnout. However, according to the study, free-turnout play an important part of the horses' behaviours, health condition and the fitness which others cannot replace. A study was done in 2011 to investigate the temporary turnout's effect in the behaviour of competitive horses housed in single stalls. The result showed that the behaviour within the stall was more restless in the treatment without turnout – which became apparent in significantly more frequent changes between behaviours as compared with the treatments with turnout (Werhahn, 2011). Therefore, turnout is essential to the behaviours of horses and the lack of turnout leads to abnormal behaviours. Besides that, turnout could influence training as well. Werhahn's study measured the distance covered during turnout and the result showed a significantly shorter distance covered when horses were trained before they were turned out compared with turnout before training. If horses were turned out after training, they also showed less trotting and cantering and more dozing (Werhahn, 2011). Turnout is important for the horses' health too. A study was conducted to compare stabled horses' maintenance of fitness during extended period of no forced exercise. The result showed that stalled horses without exercise lost fitness, whereas pastured-turnout horses remained as fit as stalled with exercise horses. Additionally, pastured-turnout horses had greater bone mineral content. Study suggested that access to pasture could help to maintain bone strength and exercise fitness ability (Patricia et al, 2013). In general, turnout is crucial because it can influence horses' behaviours and health. However, because of the land limitation in most riding clubs of China, the access to turnout is limited in most riding clubs. Different methods could be used such as using horse walkers or treadmill. Daily training becomes more important when turnout access is limited. This process needs horse trainers or riders to choose the exercise method wisely. According to a study investigating the preference and demand for exercise in stabled horses (Lee et al, 2011), horses are not strongly motivated to exercise alone and will choose not to endure forced exercise on a treadmill. Therefore, the social context of voluntary exercise is important, so that horses are willing to stay out of their stalls longer if other horses are present and will show compensatory behaviour only if other horses are present. Lunging or using the walkers is preferred and horses are suggested to be exercised together.

For the clubs that have access to field turnout, group turnout is suggested. A study in 2012 investigated the behaviour and activity patterns during free exercise in single stall housed competitive horses and the result showed that when turnout was allowed in groups, the horses spent more time in social interaction and less time walking and trotting than the solitary-turnout horses. Therefore, greater distance was covered in solitary-turnout horses and besides that, the distance solitary-turnout horses covered showed a greater

deviation both within and between days compared to group-turnout horses. The interviewee suggested that the horses they had had never learned to social and therefore, were solitary turned out. However, according to the study, the exercise intensity has a great deviation compared to group-turnout horses. Therefore, group turnout is preferred as a part of daily exercise plan.

5.5 Adaptation:

- lack of application of body conditional score system
- unable to recover fitness level after import

Body condition score system is suggested to be adapted by all riding clubs to available the feeding plan. This is the numerical scale used to evaluate the amount of fat on a horse's body. It helps to create universal scale to assess body weight and does not require specialized equipment. It's suggested for each club to study the standard of BCS and keep a record of it. Horse owners, trainers, breeders, horse enthusiasts, weekend riders or anyone who cares about the well-being and fitness level of their horse should learn to scoring the horse.

5.6. Disease and treatment:

- ulcer (equipment limitation)

Due to lack of equipment, equine gastric ulceration brings little attention in China. To improve the condition, a clear understanding of the disease should be built first. Equine gastric ulceration was first described in 1986 (Hammond, 1986) and is common in all types of horses. Increased acid exposure is the predominant cause of ulceration. Although the ultimate effect of stabling versus pasture is unclear with no significant difference found between racehorses kept in pasture full time and those stabled full time (Bell et al, 2007), factors such as exercise intensity diet and stress can have greater influence on ulceration. It has been suggested that it is more common in horses fed twice daily than those fed three times a day. Low forage diet, intense exercise, high concentrate diet, regular transport, intermittent starvation, management change, water deprivation, prolonged stabling and stress are risky factors for equine gastric ulcer (Hepburn, 2011).

According to Hepburn (2011), the clinical signs are variable and often vague for ulcer diagnosis. Clinically relevant ulceration can occur in asymptomatic cases, although the prevalence is significantly lower. Gastroscopy is the gold standard diagnostic technique for the identification and grading of ulceration. Therefore, it should be introduced into Chinese equine hospitals for the welfare concern.

To treat the disease, a combination of pharmacological (such as Proton pump inhibitors and Omeprazole) therapy and risk reduction is vital in most ulcer cases and can be effective regardless of training intensity (Hepburn, 2011). Omeprazole can also be used as ulcer prevention medicine. The prophylactic therapy with omeprazole for prevention of equine gastric ulcer syndrome was studied by Mason and the result suggested that omeprazole prophylaxis in active training horses significantly reduces gastric ulceration compared to no prophylaxis (Mason, 2019). The nutrition management of horse with ulcer was studied in 2017 with specific diet recommended including feeding as much forage as possible, feeding

lower energy fibre sources to maximise chewing, adding chaff including alfalfa, feeding vegetable oil supplement, providing more pasture turnout and avoiding transfer (Andrews et al, 2015). Repeat endoscopy used to confirm ulcer healing is recommended. Maximising consistent daytime fibre intake and constant provision of water are the key and giving a small forage meal 30 minutes before exercise is recommended (Hepburn, 2011).

5.7. Abnormal behaviours

- out-dated knowledge about the treatment
- try to hind fact

Most clubs in China suggested that the abnormal behaviours were common despite that they have tendency of covering the trend. The general most interviewees have towards it is that it's untreatable. The problem reflected here is the lack of knowledge since all the method they mentioned is out dated. The Forssell procedure (1984) including removal of those parts of muscles that flex the neck to treat crib biting is no longer used in UK due to its brutality. Prevention of these behaviours should be considered first. The short -time prevention of crib biting can be achieved by housing animals in projectionless boxes or modifying any ledges in a loose-box with plastic guttering and rolling bars. Removing buckets is also recommended (Kennedy et al, 1993). Permanent fistulation of the buccal cavity (Karlander et al, 1965) or the use of a fluted bit is claimed to control the air engulfing phase by making it difficult for the horse to keep the mouth airtight (Miller and Robertson, 1959). Punishing grasping including using electric fence is suggested. Dog training collar can be adapted to fit the equine neck and be remotely controlled presence (Haupt and McDonnell, 1993). Food rewarding has been investigated as an approach to crib-biting prevention too (Haupt, 1982; Winkill et al, 1996). In addition, Wickens (Wickens, 2009) found a negative relationship between the daily amount of turn-out and crib-biting behaviour. Wickens also found that social contact with other horses (i.e. in the same enclosure) reduced the probability of crib-biting behaviour. Therefore, turn-out is a good way to reduce crib biting. It has also been found that free deprivation can result in gastric ulceration due to increased exposure of the squamous mucosal lining to gastric acid secretion. The feeding of pelleted and sweet feed diets has been suggested to have a greater and more prolonged gastrin response compared to ad libitum hay feed (Smyth, 1989). Therefore, crib biting can be reduced through higher level of turnout and ensuring ad lib forage. Acupuncture was used in crib biting too, however, limited studies have been done with it. Since acupuncture is predominant in China, it should be studied and hopefully be applied.

The lack of attention of stereotypic behaviours is another problem among industry. Throughout the interviews, the cause and the effect of abnormal behaviours were unclear among most interviewees. And compared to other problems such as horse selection and training, they do not take this importantly. Further related education towards equine welfare should be conducted focusing on abnormal behaviour. Because there seem to be a general lack of awareness of the evaluation it has towards welfare. This is in contract with the UK where there is plenty if research in this area to help people to better understand the condition. Therefore, recommendations of housing and management were formed improve the situation.

5.8. Veterinary condition

- traditional country vets' (mostly club vets) lack of academic skills
- academic professional vets' lack of experience (due to the lack of practise at professional vet university)
- shortage in the number of equine hospitals
- overconfident due to lack of competitive
- lack of veterinary resources for emergency cases at night
- conflict between vet and clubs (vets being superiority)
- very poor facility for horses (Wuhan)
- delayed report of horses' healthy problem
- unethical diagnosing process (Inner Mongolia)
- limited excess to treating equipment (too spread out)

The problem of the vet is the major factor of ensuring the health of horses. Veterinarians have a vital role in changing the ways animals are cared for and treated. Whether working hands-on with animals and owners, or using their expertise to advice government and international organizations, veterinarians are catalysts. The OIE state that all veterinary graduates must have a good understanding of animal welfare as a day one competency. China is different in that part since a large portion of vets are not academically trained. The practice license only developed in 2009 and not a lot welfare study is included. To change the situation, education should be conducted both in vet colleges and riding clubs. Welfare awareness should be raised in both old-generation vets and new-generation vets.

Besides that, the number of equine hospitals is not large enough and industry is facing the problem of lack of veterinary resources. Due to this fact, some vets developed superiority among the industry because there is no competitor around. The ethical auth the vet take needs to be refreshed regularly, especially their responsibility towards equine welfare. Besides that, as a Chinese veterinary student myself, the classes I took in the vet school is not practical enough and this causes young vets' lack of skills in generally. Therefore, veterinary school should open more practical classes and coordination between riding clubs and veterinary colleges is suggested to be built in all schools.

The veterinary facilities in China is in shortage and it's extremely bad in some clubs. The long-term solution is to build up regular welfare inspections for every clubs across the country. The investigation should include investigating the health condition reports of club horses, latest unsolved cases and above all, a complete equine welfare supporting system.

China is unique because the industry difference between cities is prominent. For example, Beijing has much better equine facilities compared to Wuhan. Plus the climate difference, different equine husbandry standards should be established. Expertise opinions should be collected from vets with regards of what to feed or how to exercise horses in different cities in China.

5.9. Welfare system:

- lack of arrangement for old retired horses
- no official way to deal with dead horses
- general lack of actions

- vets' lack of responsibility towards equine welfare

The limitations of land and staff result in the lack of arrangement of old retired horses. In UK, there are lots of organisations similar to Greatwood where I have studied in that take care of retired horses. The organization would open educational equine courses for horse enthusiasts. In China, horses keeping has becoming more and more popular, especially among young children. They are developing attachments with horses from riding classes. These organizations could open to benefit them by teaching knowledge about horses. Besides that, it has been suggested that there are potential benefits for human medicine. Study suggested that aged horses can be used in hippotherapy for elderly people and in the near future, horses may be able to help extend the human lifespan or at least diminish the consequences of aging (Wisniewka et al, 2019). Therefore, the organizations could benefit from horses too by providing them with place to retire.

The industry reflected the problem of lack of action towards equine welfare. In the future, more practical restrictions should be developed to ensure the welfare of horses. The restriction should include the duty of care of horses (horse owners' responsible of keeping horses healthy), suitable environment (stable and outdoor land), suitable diet (BCS system as an assessment tool), behavioural needs including training, exercise, turnout frequency according to horses, correct illness treatment (enforce the vet's awareness towards welfare should be a starting point), developing arrangement for retired horses which could help to build up essential emotional bond between human and horses.

Chapter 6: Self-reflection

Looking back of my research journey which was filled with challenges, I enjoyed every bit of it. I think I'm a student who is fortunate enough to stand between western and eastern cultures to conduct this research. The four-year veterinary study in Qingdao enables me to obtain an understanding of Chinese veterinary situation. And the study and working experience in the US, Japan and the UK helps me to see and learn about the industry of different cultures. I enjoyed the exploring process of both the topic and myself. I am confident to show my judgement of it. And I learned a lot about myself through this experience too.

The self-reflecting methodology was not the methodology I planned to use at the beginning. I had to change into it due to the low response rate of questionnaire. This has led to a whole new journey: a journey of me becoming a reflexive researcher. Before this study, I had never thought that I could use my experience as a methodology of doing the research. All the scientific methodology kept stuck on my mind and I thought I was a 100% scientist. Choosing IPA at the end was partly due to the interview process. People's reaction to my questions worth more than the answer itself because it suggested their deep-down welfare awareness. This is the time I realised that I need to change my methodology into IPA. IPA needs to use the lived experience as methodology. With the help from Jo and Yaqub, I began to realise the power of lived experience. Although everyone has his own unique experience, the basic feelings are the same. Therefore, by sharing my journey of understanding equine welfare and investigating it in China, others who read my paper would begin to understand and feel the way I feel about the industry and realize how desperately it needs to change.

I appreciate the methodology change because it helped me to gain a deeper understanding and reflection of the topic and myself. This methodology taught me to become reflexive which required me to see things from a third-person perspective and learned to think outside the box. This meant not only did I need to judge other people's words, I also needed to judge myself and why I felt certain way about their words. This way of thinking can benefit me more than just this research. Therefore, I appreciate this methodology change.

The process of the research did not start easy. Because the interviews were conducted with Chinese equine people which were in Chinese. The data interpretation, however, needs to be in English and use critical thinking. The culture barrier is the biggest challenge during this process. By working closely with Jo throughout the study, I started to raise questions about my own culture and became brave enough to step out of my comfort zone to discuss them. This was an uneasy process, especially for a Chinese student who had stayed abroad for a while.

The inspiration of this topic came from my experience which was mentioned in Chapter 3. In general, the result was not what I expected. Because I didn't expect to find a massive quantity of problems of the industry. Before conducting the study, I assumed that there could be some problems with outdated equine knowledge or equipment. However, the result of the interview was not what I had expected. This was mainly focus on the veterinary

condition part. Through this research and this study experience, I hope there could be changes and improvements in the future. And I wish I could be a part of it.

My next step is to study in Royal veterinary college and become a qualified vet. And the bridge I have between east and west culture could enable me to make changes to the industry. By combining what I found through the research and what the problems might be with the professional veterinary knowledge I'm about to gain, I hope I could really make a change to Chinese equine welfare system in the future. By merging the equine welfare concept with veterinary clinical knowledge, I will be able to stand on a stronger and powerful position to do that. And hopefully, I could get support from Hong Kong Jockey Club to make some changes to the equine welfare in China.

Besides finishing the paper during my research journey, I also gained qualification in organisations such as Greatwood charity and British Racing school. Through the introduction of British Racing school, I got in touch with Hong Kong Jockey Club and got its scholarship to study Postgraduate certification course of veterinary practice. This journey helped me to prepare my future study in every possible way. Besides that, through my lived experience, I've become a reflexive researcher bringing together science, welfare ethics and a wholistic passion for horses and human. This process provided me with a chance to bring my passion and science together. And I'm sure this experience will be memorable to me forever. I couldn't be more grateful about all the people that have helped me. Thank you all for supporting me and encouraging me!

In the end, I have to point out some limitations of the study. Because I think the research journey did not stop after finishing the study. I hope this could just be a beginning stage of developing equine welfare system in China. This research can hopefully encourage later researchers to develop deeper studies on this topic with reference of my study limitations. Firstly, the interpretation of the data is translated from Chinese to English on my own which may include unprecise words. I try to overcome it by correcting the translation multiple times. But it could be more professional with more experienced translators. The other limitation is my lack of interview experience. There are some parts of my interview which I feel like it could be better by asking deeper questions which I hope the future studies could overcome. However, this shortage also had its benefit. Because of my lack of interview experience, people tended to let their guards down easily and be relaxed throughout the interview. After they knew that I was just a student instead of a media person or a journalist, they tended to talk more and show their true reaction and emotion to my questions. For instance, if it was another person who had great interview skills, most of the interviewees would be more cautious about their answers and expression. Therefore, it would be less likely to get the truthful answers compared to mine.

Lastly, I would like to say that the equine welfare exploration is endless. Especially in China where horse culture has existed for centuries. This has brought both pros and cons to the industry. What we can do is keeping searching for the best solutions and try to adapt it in the most suitable way as possible!

Reference

- American Association of Equine Practitioners (1954) Available at: <https://aaep.org/>
- Andrews, F. M., Larson, C. and Harris, P. (2015) Nutritional management of gastric ulceration. *Equine Veterinary Education*.29(1): 45-55
- Animals Asia (2008) How are Animals Abused and Exploited in Asia? Available from: <https://www.animalsasia.org/uk/facts-about-cruelty-to-animals-in-asia.html>
- Bass L., Swain E., Santos H., Hess T., Black J. (2018) Effects of Feeding Frequency Using a Commercial Automated Feeding Device on Gastric Ulceration in Exercised Quarter Horses. *Journal of Equine Veterinary Science*, 64: 96-100
- Bell R. J., Kingston J. k., Mogg T. D., Perkins N. R. (2007) The prevalence of gastric ulceration in racehorse in New Zealand. *New Zealand Veterinary Journey*. 55: 13-18
- Brambell R. (1965) *Report of the Technical Committee to Enquire into the Welfare of Animals Kept Under Intensive Livestock Husbandry Systems*, Cmd. (Great Britain. Parliament), H.M. Stationery Office: 1–84
- Braun, V., Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3: 77-101
- Brubaker L., Monique A.R.Udell (2016) Cognition and learning in horses (*Equus caballus*): What we know and why we should ask more. *Behavioural Processes*. 126:121-131
- Butterfield C., Grumpelt B., Kimmel D., Patterson R., Jones K., Shannon L. Scott, Schaefer A. (2018) The Pretransport Management of Stress in Performance Horses. *Journal of Equine Veterinary Science*. 69: 145-148
- Cabit, S. (1993) Neurobiological basis of stereotypies. In *Stereotypic animal behaviour: Fundamental and Applications to welfare*, Ed: A.B Lawrence and J. Rushen,. CAB International, Wallingford: 119-146
- China Dialogue (2013) Animal Welfare has become a hot topic in China. Available at: <https://www.chinadialogue.net/culture/5879-Animal-welfare-debate-is-cultural-flashpoint-in-China/ch>
- China Horse Fair (2018) Available at: <http://www.chinahorsefair.com.cn/MarketEn.asp>
- Cooper, J. J. and Mason, G. J. (1998) The identification of abnormal behaviour and behavioural problems in stabled horses and their relationship to horse welfare: a comparative review. *Equine Veterinary Journal*. 30(S27): 5-9
- Department for Environment, Feed & Rural Affairs (2013) Code of practice for the welfare of horses, ponies, donkeys and their hybrids. Available from: <https://www.gov.uk/>
- Dodson and Horrell (2019) Horse feed. Available at: <https://www.dodsonandhorrellpetfood.co.uk/horse-feed>
- Dominguez, M., Münstermann, S., Guindos, I. and Timoney, P. (2016) Equine disease events resulting from international horse movements: Systematic review and lessons learned. *Equine Vet J*, 48: 641-653

- Ellis A. D, Fell M., Luck K., Gill L., Owen H., Briars H., Barfoot C., Harris P. (2015) Effect of forage presentation on feed intake behaviour in stabled horses. *Applied Animal Behaviour Science*.165: 88-94
- Ede A. (2015) A desktop survey of the Chinese Equine Industry for The Royal Agricultural College, Cirencester
- Farquhar J. D. (2012) Case Study Research for Business. 1st edn. SAGE Publications Ltd
- Fleming K., Hessel E. D., Weghe V. (2008) Evaluation of Factors Influencing the Generation of Ammonia in Different Bedding Materials Used for Horse Keeping. *Journal of Equine Veterinary Science*, 28(4):223-231
- Goodwin, D., Davidson, H. P. and Harris, P. (2002) Foraging enrichment for stabled horses: effects on behaviour and selection. *Equine Veterinary Journal*, 34: 686-691
- Goodwin, D., Davidson, HPB., Harris, P (2007) Responses of horses offered a choice between stables containing single or multiple forages. *Veterinary Record* 160: 548-551.
- Greening L. (2018) Stereotypies and Other Abnormal Behavior in Welfare Assessment, Reference Module in Life Sciences
- Hammond CJ, Mason DK, Watkins KL. (1986) Gastric ulceration in mature thoroughbred horses. *Equine Vet J*. 1986 Jul;18(4): 284-7
- Hamza A. (2014) Interviewing as a Data Collection Method: A Critical Review. *English Linguistics Research*, Vol 3, No 1: 39-45
- Horserace Betting Levy Board (2019) Guidance on isolation. Code of Practice 2019. Available at: <https://codes.hblb.org.uk/index.php/page/130>
- Heitman K., Rabquer B., Heitman E., Streu C., Anderson P. (2017) The Use of Lavender Aromatherapy to Relieve Stress in Trailered Horses. *Journal of Equine Veterinary Science*. 63: 8-12
- Hemsworth L. M., Jongman E., Coleman J. G.(2015) Recreational horse welfare: The relationships between recreational horse owner attributes and recreational horse welfare. *Applied Animal Behaviour Science*. 165: 1-1
- Henneke, D R; Potter, G D; Kreider, J L; Yeates, B F (1983) Relationship between condition score, physical measurements and body fat percentage in mares". Equine Veterinary Journal. 2001 Oct; 15 (4): 371-2*
- Hepburn, R. (2011) Gastric ulceration in horses. *In Practice*. 33(3): 116-124
- Haupt K. A. and McDonnell S. M. (1993) Equine stereotypies. *Comp. cont Edu. Prac. Vet* 15:1265-1272
- Husserl, E. (1913/1982) Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy - First Book: General Introduction to a Pure Phenomenology. (F. Kersten, Trans.) The Hague: Nijhoff
- Independent (2017) US-China trade war. Available at <https://www.independent.co.uk/topic/us-china-trade-war>

- Ijichi C., Griffin K., Squibb K., Favier R. (2018) Stranger danger? An investigation into the influence of human-horse bond on stress and behaviour. *Applied Animal Behaviour Science*. 206: 59-63
- Jiwen C. (2008) *Animal Welfare Law. Spot and Difficulty*. Beijing: Law production.
- Jørgensen M. H. G., Liestøl H. S., Bøe K. E. (2011) Effects of enrichment items on activity and social interactions in domestic horses (*Equus caballus*). *Applied Animal Behaviour Science*. 129(2–4): 100-110
- Karlander, S. Masson J. and Tufvesson G. (1965) Buccostomy as a method of treatment for aerophagia (wind sucking) in the horse. *Nordisk vet. med* 17: 455-458
- Kennedy J. S., Schwabe A. E. and Broom D. M. (1993) Crib-biting and wind-sucking stereotypies in the horse *Equine vet. Edu*. 5: 142-147
- Kwiatkowska-Stenzel A., Sowińska J., Witkowska D. (2016) The Effect of Different Bedding Materials Used in Stable on Horses Behavior. *Journal of Equine Veterinary Science*.42: 57-66
- Klontz B. T., Bivens A., Leinart D., Klontz T. (2007) The Effectiveness of Equine-Assisted Experiential Therapy: Results of an Open Clinical Trial. *Society and Animals* 15: 257-267
- Lee J., Floyd T., Erb H., Houpt K. (2011) Preference and demand for exercise in stabled horses. *Applied Animal Behaviour Science*. 130(3–4): 91-100
- Marlin D. Consulting (2014) Available at: <http://davidmarlin.co.uk/wp-content/uploads/2014/09/Fitness-Training-Performance-2014.pdf>
- Marlin D J, Schroter R C, White S L, Maykuth P, Matthesen G, Mills P C, Waran N, Harris P (2001) Recovery from transport and acclimatisation of competition horses in a hot humid environment. *Equine Vet J*. 2001 Jul;33(4):371-9
- Mason LV, Moroney JR, Mason JR. (2019) Prophylactic therapy with omeprazole for prevention of equine gastric ulcer syndrome (EGUS) in horses in active training: A meta-analysis. *Equine Vet J*. 2019 Jan; 51(1): 11-19
- Mason G, Rushen J. (2006) *Stereotypic animal behaviour* Second Edition: 12-15
- McGreevy, P. D., Cripps, P. J., French, N. P., Green, L. E. and Nicol, C. J. (1995) Management factors associated with stereotypic and redirected behaviour in the Thoroughbred horse. *Equine Veterinary Journal*. 27(2): 86-91
- Ministry of Agriculture of the People's Republic of China (2017) World Farm Animal Welfare Conference Held in China. Available at: http://jiuban.moa.gov.cn/zwl/m/gjjl/201710/t20171012_5838752.htm
- Morgan K. (1998) Thermoneutral zone and critical temperatures of horses. *Journal of Thermal Biology*, 23(1): 59-61
- Nagy, K., Schrott, A. and Kabai, P. (2008) Possible influence of neighbours on stereotypic behaviour in horses. *Applied Animal Behaviour Science*. 111(3–4): 321-328

Nazarenko Y., Westendorf L. M., Williams A. C., Mainelis G. (2018) The Effects of Bedding Type in Stalls and Activity of Horses on Stall Air Quality. *Journal of Equine Veterinary Science*. 67: 91-98

Nicholls L (2018) Environmental enrichment for the horses: The need to forage. Available at: <https://fall2018.iaabcjournal.org/2018/10/25/the-need-to-forage/>

Patricia M. Graham-Thiers, L. Kristen Bowen (2013) Improved Ability to Maintain Fitness in Horses During Large Pasture Turnout. *Journal of Equine Veterinary Science*. 33(8): 581-585

Rabionet E. S. (2011) How I learned to design and conduct Semi-structured Interviews: An ongoing and Continuous Journey. *The Qualitative Report*. 16(2): 563-566

Ralston S.L. (1993) Analysis of Feeds and Forages of Horses. Rutgers Cooperative Extension. Available at: https://esc.rutgers.edu/fact_sheet/the-basics-of-equine-nutrition/

Red Tractor (2019) Available at: <https://www.redtractor.org.uk/choose-site>

RSPCA (2019) Available at: <https://www.rspca.org.uk/home>

Rubioab D. M., Agüeraab E., Castejon-Riberab A., Riberac C. (2017): Objectives, Principles and Methods of Strength Training for Horses. *Journal of Equine Veterinary Science*. 56: 93-103

Ruth H. L. (2012) Ethical thinking in a discipline context: the ethical development of undergraduates and expectation of tutors in the arts, social and pure science. Available in: <https://www.chester.ac.uk/sites/files/chester/Dissertation%20Final.pdf>

Silvia E R. (2011) How I learned to design and conduct Semi-structured Interviews: An ongoing and continuous Journey. *The Qualitative Report*. 16(2): 563-566

Smyth, G.B., Young, D.W., Hammond, L.S. (1989) Effects of diet and feeding on postprandial serum gastrin and insulin concentrations in adult horses. *Equine Vet. J. Suppl.* 7: 56–59

Sweeting M. P., Houpt C. E., Houpt K. A. (1985) Social Facilitation of Feeding and Time Budgets in Stabled Ponies. *Journal of Animal Science*. 60(2): 369–374

The horse (2016) Equine Stereotypies: Vice or Coping Mechanism. Available at: <https://thehorse.com/18866/equine-stereotypies-vice-or-coping-mechanism/>

Think Again (2012) Animal Welfare: only looks pretty. Available at: <http://news.cntv.cn/special/thinkagain/animalwelfare/>

Thoroughbred Racing Commentary (2014) Horse welfare in China must keep up with growing Equine Industry. Available at: <https://www.thoroughbredracing.com/articles/horse-welfare-china-must-keep-growing-equine-industry/>

Tongjie C. (2008) *Animal Protection and Welfare*. Beijing: China Agriculture Press.

Werhahn H., Engel F. Hessel, Bachhausen I., Herman F.A. Weghe V.D. (2011) Effects of Different Bedding Materials on the Behavior of Horses Housed in Single Stalls. *Journal of Equine Veterinary Science*, 30(8): 425-431

- Werhahn H., Hessel E. F., Schulze H., Herman F.A. Weghe V. D. (2011) Temporary Turnout for Free Exercise in Groups: Effects on the Behaviour of Competition Horses Housed in Single Stalls. *Journal of Equine Veterinary Science*. 31(7): 417-425
- Wiśniewska M., Janczarek I., Piwczyński D. (2019) The Aging Phenomenon of Horses With Reference to Human–Horse Relations. *Journal of Equine Veterinary Science*. 73: 37-42
- Wickens, C.L. (2009) Investigating specific stereotypic behaviors in horses. Ph.D. dissertation, Michigan State University, East Lansing.
- Wilson, K., Buultjens, M., Monfries, M., & Karimi, L. (2017) Equine-Assisted Psychotherapy for adolescents experiencing depression and/or anxiety: A therapist’s perspective. *Clinical Child Psychology and Psychiatry*, 22(1), 16–33
- Winskill L. C., Young R. J., Channing C. E., Hurley J. and Waran N. K. (1996) The effect o a foreign device (a modified Edinburgh football) on the behaviour of the stabled horse. *Apply Animal Behaviour Science*. 48: 25-35
- World Horse Welfare (2019) Available at: <https://www.worldhorsewelfare.org/About-Us>
- World Horse Welfare (2018) New Collaboration to develop equine welfare in China. Available at: <https://www.worldhorsewelfare.org/Article/New-collaboration-to-develop-equine-welfare-in-China>
- Richardson J K., Murray A.M.D. (2016) Fiber for Performance Horses: A Review, *Journal of Equine Veterinary Science*. 46: 31-39

Appendix 1

Table 1: Importing information

	Total number	Breed	Age	Location
Club A	40	French pony	4-13	Beijing
Club B	50	Horses for jumping	5-10	Beijing
Club C	140	Warm blood and pony	8-12	Beijing
Club D	29	Horses for jumping		Beijing
Club E	280	Thoroughbred		Beijing
Club F	2013 is the last importation, 2 horses were imported then			Qingdao
Club G	Did not import anymore during recent years, however, used to import 30-40 horses each year			Qingdao
Club H				Qingdao
Club I	15	Lipizzaner and Arabian		Wuhan
Race yard 1		Thoroughbred		Wuhan
Race yard 2	400	Thoroughbred	4-8	Inner Mongolia

Table 2-1: Feeding plan

	Feed	Forage	Time	How to decide	Local horses
Club A	Concentrated feed	Chinese wildrye	3 times feed 4 times forage	vet and stable manager	Less feed Same hay
Club B	Grain Concentrated feed	Local hay	3 times feed 4 times forage	vet and nutritious.	
Club C	Grain Red mill (1.2m or higher jumping horses) Local produced feed (the rest of competitive horses)	Chinese wildrye and imported alfalfa	1 times feed (11:30am to 1:30 pm) 2 times forage (11:30 am -1:30 pm & 6 pm – 10:30 pm)	Own experience vets for adjustment	Less/no feed Same hay
Club D	Feed made according to own recipe	Imported timothy hay	3 times feed (from 5:30am, every 4 hours) 4 times forage (before 5:30 am & 9-9:30 am & 3-3:30 pm &9-9:30 pm)	Own experience Adjust according to the feedback of horse and the nutritious analysis report	No local horses
Club E					
Club F	Red rum mixed feed	Mongolian hay	3 times feed (morning, noon and evening). 4 times forage	The reputation of the feed brand Personal experience	Feed less
Club G	Red rum (competing horses) Mixed feed (non-competing horses)	Local hay produced in Daqing	3 times feed 4 times hay	Used to copy western receipt Now the feed check repot from university	Only mixed feed No red rum

Club H					
Club I	Complete feed	Local hay	2 times feed (in winter and autumn) 3 times feed (in spring and summer) 4 times hay	experience	
Race yard 1	Complete feed (competitive horses) Barley and bran (local horses)	Chinese wildrye	2-3 times feed 3-4 times forage	A niversity professor	Different recipe written by professor (cost controlling)
Race yard 2	Red mill Mixed feed	Mongolian hay Northwest produced hay	2 times feed (6:00 am & 5:00 pm) All-time forage	Suggestion from other countries.	More oats for race horse More protein for breeding horses (mostly local)

Table 2-2: Forage analysis of club D

Test item	Result
Crude protein	8.36%
Crude ash	7.26%
Crude fat	1.53%
Water	7.86%
Ca	0.37%
P	0.19%

Table 3: Stable and bedding

	Stable number	Bedding	Reason
Club A	56	Rice hull	
Club B	100	Rice hull	Easy to get, most commonly used in China. Others are very hard to get in China and expensive too.
Club C	160	Rice hull	The only available bedding in China.
Club D	30	Shaving	
Club E			
Club F	Temporary stable	Rice hull	
Club G	160-170	Shaving	Good at absorbing water. Expensive and hard to get in China
Club H		Rice hull (summer & spring) Cork (winter & fall)	Rice shell does not produce as much heat as cork in the summer Crushed wood pellets bedding is the better choice when it is cold
Club I		Rice hull	
R1	200	Shaving	Absorb water very well. Shaving made from birch or banyan which doesn't smell
R2	750	Shaving Rice hull	Due to the shortage in shaving, rice shell is used at the same time.

Table 4-1: Training frequency

	Rest	Lunging	Riding (riders)	Riding (lessons)	Walker/Treadmill	Turn out	Swimming
Club A	Monday	Mainly on Tuesday, less on		Wednesday to Friday: 5 lessons per day Weekend: 6-7 lessons per day	Daily	Small ponies were kept in an indoor pin	-
Club B		1-2 times a day	Jumping 2-3 times a week	Once a day	One or two times a day	3-4 times a week	-
Club C	Monday (no riding)	Used for warming up	Tuesday to Friday	Mostly on weekend	Everyday	Uncertain, depends on horses	-
Club D	Once a week (no riding)	Non Only with green horses	Daily	No membership	Daily	Lead walking instead	
Club E		Mostly for unmaturred horses	Horses need to be ridden or on the walk at least once a day				For injured horses
Club F	Once a week (no riding)	Only do that when walker is unavailable	Daily	Daily	Once a day	2-3 times a week	-
Club G	Once a week	Used as warm up	Daily	Daily	Used when the riders are unavailable	Unmature horses are kept outside daily The rest horses do not turn out much	-
Club H		Almost every day	Every day for compet	-	-	Everyday or once 2-3 days	-

			itive horses				
Club I					-		For injured horses
R1		Daily	Daily	-	Daily	Daily	For injured horses
R2		The training pan changed regularly. The interviewee gave the basic rules, however, no specific training plan					

Table 4-2: Training time

	Lunging	Riding	Walker	Turn out	Swimming
Club A		Each lesson lasts 45min to 1.5 hours			
Club B	30 min	30min to 1 hour	30 min	1-2 hours	
Club C		40-45 min	45 min	3-4 hours	
Club D	40 min	Around 40 min	20 min to an hour depend on the training intensity		
Club E		45 min for costumer riding	At least 20 min		
Club F		30-60 min	15-25 min	Around 1 hour	
Club G		Around 1 hour	20-30 min		
Club H	30-45 min	Depend on training	-	3 hours	
Club I	30 min	45-60 min	-		
R1			20-30 min	20 min	15 min
R2			At least 20 min		3-6 laps

Table 5: BCS before and after importing

	Body condition when imported	Body condition 3 month after importation
Club A	the fitness of horses won't change much because they do not exercise horse much in the first 3 months after importation. After 1 year of training in the club, the BCS of horses may change depend training	
Club B	Grow fat due to the lack of exercise in the isolation box	Turn fat into muscle which makes horses looks skinner
Club C	Change a lot after importing because of the good feeding and drinking of the club	
Club D		
Club E		
Club F	In a very bad condition because of the bad management in the isolation box.	Stronger and fatter
Club G	The body condition of horses most depend on the feeding and does not change much if the feeding is the same.	
Club H		
Club I	The body condition mostly changes with the season and will get skinnier in summer because of the heat and lack of appetite	
Race yard 1	Body conditional score 3	Body conditional score 2-3
Race yard 2	No significant change	

Table 6: Common seen disease

	Common disease
Club A	
Club B	Infectious disease (equine flu – most popular), parasites (most common on out-keeping horses), digestive disease (intestinal spasm, gastroenteritis catarrhalis and intestinal obstruction), disease related to exercise (tenosynovitis, laminitis, fork rot, white line crack), respiratory disease (asthma)
Club C	
Club D	intestinal spasm, digestive trouble, intestinal blockage and stress, respiratory disease (cold, Pleuropneumonia), infectious disease (only flu vaccine is required before big competition), horse strangles (have been seen before)
Club E	laryngeal hemiplegia (1/4 thoroughbred have it), cold & fever (seen from time to time, but not considered common), digestive disease (not common in thoroughbred), lameness (common seen in warm blood, caused from arthritis and spur infection), injury (most horses have it, thoroughbred especially due to their hot temper), colic (less common)
Club F	intestinal disease, skin disease, mumps (answered by a rider)
Club G	Injury, trauma caused by exercise, stomach ache caused by season change and ulcer,
Club H	
Club I	lung infection, stomach ache and intestinal illness
R1	Injury (most common), digestive (intestinal crump), stomach ache (effected by the weather), cold & fever (rare), equine flu (happened few years ago), commonality: lameness first, injury second, digestive disease third, colic fourth, respiratory disease fifth, thermoregulation disorder sixth, ulcer (undiagnosable), obesity (very rare). Weight loss (normal for most horses). Dental issues (very common).
R2	

Appendix 2

I Questionnaire for horse-owner:

1 How long have you been in the equine business?

5 years or less 6-10 years 11-15 years 16-20 years More than 20 years

2 How long have you been in this club?

5 years or less 6-10 years 11-15 years 16-20 years More than 20 years

3 How long have you been riding?

5 years or less 6-10 years 11-15 years
16-20 years More than 20 years I do not ride

4 Please provide information about you previous equine related experience before being a horse owner of this club:

5 Do you have oversea education or learning experience?

Yes No

6 How large is the membership group of this club?

Less than 10 11-20 21-30 31-40 41-50 More than 50

7 Please select the number of horses you imported during the last 12 months?

Under 5 6-10 11-15 16-20 Over 20

8 When was the last time of importation?

9 What are considered to limit the number of horses imported each time?

Cost Number of isolation boxes Staff number Facility limitation

Government police limitation The need of horses of the club

Others please specify:

10 The countries that are horses imported from (please write down the number of horses from each country as well):

UK : US : Netherlands : Australia : Germany :

New Zealand : Belgium : France :

Others Please specify:

11 What breeds did you import?

Dutch warm blood Arabian horse Belgian horse Appalossa Oldenburg
Hanoverian horse Thoroughbred

Other breeds Please specify:

12 The activities the imported horses are in (multiple choices are applicable):

Jumping Dressage Racing Leisure riding Barrel racing Polo

Other activities Please specify:

13 How old are the horses when they are imported mostly (multiple choices are applicable)?

Under 2 year old 2-5 years old 5-10 years old Over 10 years old

14 Do you have preference of importation and please write down the reasons?

Mare : Stallion : Gelding : No preference

15 Do you use them to breed with local horses?

Yes No

16 Do you use importers or importing agencies to supply the horses?

Yes → please answer question a No → please answer question b

a. How did you find out about importers or agencies?

Recommendation of other clubs Recommendation from the vet

Found on the internet Contacted by the importers or agencies

Others ways please specify:

b. How do you buy horse from other countries?

From actions From the provide owner directly Personal contact

Other ways please specify:

17 Please rank the following values in order of preference when selecting horses for importation and write down the order of the letter in front of the values:

- a. Gender
- b. Age
- c. Temperament
- d. Pedigree
- e. Physical states
- f. Former performance record
- g. Breed
- h. Colour
- i. Height
- j. importing country
- k. event

II Questionnaire for horse trainers:

1 How long have you been working in this club?

5 years or less 6-10 years 11-15 years 16-20 years Above 20 years

2 How did you find a job at this club?

Through friends within the industry found it online

Got contacted by the club others please specify:

3 Please select the relevant options below that apply to your previous experience:

Worked at another club name: Worked abroad country:

Worked as an assistant for a professional trainer before

Have horses back home from which you learned horse training

Went to horse training school or centre for study before name:

Went on equine program (such as Darly or Godolphin's programs) before program's name:

4 Do you have a certificate of horse training or ridding?

Yes No → please go to question 6 directly

5 Which of the following institutions do you have your certificate form?

British Horse society name of the certificate: French Galop level:

American Quarter Horse Association name of the certificate:

Others please specify:

6 What event do you train horses for?

Jumping Dressage Racing Leisure riding Barrel racing Polo

Other activities please specify:

7 How many people are working as your assistants?

None 1-3 4-5 6-10 more than 10

8 Are you the only horse trainer of the club?

Yes → please ignore question 10 No write down the number of the trainer including yourself:

9 Do all the trainers train horses for the same event?

Yes No please specify the other event's name:

10 What kind of riders are you training? Please write down the number if applicable:

Pay customers number: employees of the club number:

Others please specify:

11 Please fill in the typical requirements of horse exercise:

	Walker (if applicable)	Lounge (if applicable)	Flat work (if applicable)	Jumping (if applicable)	Turn out (if applicable)
Frequency per week					
Time					

12 As for imported horses, is there any changes to the exercise plan above?

No Yes please specify:

13 What athletic level would you use for the average description of imported horses?

Poor athletic ability Averaged athletic ability with poor skills Averaged athletic ability

Good athletic with poor skills Good athletic ability

14 How long does it usually take for horses to get used to the new environment after importation?

Less than a week several weeks around one month

2-4 months More than half a year

15 Which of the following descriptions can be used to describe the perform quality of imported horse?

It keep going down It tends to go down with small differences in the between

It keeps still It tends to keep still with small rising It keeps rising

16 Who would you turn to first once you find serious problems with horses' health?

Solve it based on self-experience vets stable managers Horse owners others please specify:

17 Please rank the following factors about imported horses in reference of things to consider first when deciding plans for horse training and write down the order of the letter in front of the values:

a. Gender b. Age c. Temperament d. Pedigree e. Physical states

f. Former performance record g. Breed h. Colour i. Height j. importing country

k. event l. illness history

III Questionnaire for stable managers:

1 How long have you been in the equine business?

5 years or less 6-10 years 11-15 years 16-20 years Above 20 years

2 How long have you been working in this club?

5 years or less 6-10 years 11-15 years 16-20 years Above 20 years

3 Please select the relevant options below that apply to your previous experience:

Worked at another club before name: Worked abroad country:

Have horses back home from which you learned equine husbandry and stable management

Went to school or training centre to study stable management before name:

Went on equine program (such as Darly or Godolphin's programs) before program's name:

4 Do you have professional training in school or an official certificate for stable managing?

Yes, I had professional training at school Yes, I have a certificate No

5 Do you come from a family where you can ride from a very young age?

Yes No

6 Do you have oversea learning or training experience?

Yes No

7 How many staff are you responsible for looking after horses?

Less than 3 4-10 11-15 16-20 More than 20

8 How many horses are there in the club?

Less than 10 11-30 31-50 50-100 More than 100

9 How many of them are imported horses?

Less than 5 6-10 11-15 16-20 More than 20

10 What do you feed horses daily?

Imported hay local hay Cubes Cereal

Others please specify:

11 Do you allow horses to have free access to forage?

Yes, all the time Yes, but not all the time No

12 How do you decide what to feed horses?

Based on personal knowledge Consult with vets

Consult with feed company Consult with equine nutritionalists

others please specify:

13 How often do you feed horses?

More than 3 times a day 3 times a day Twice a day Once a day Not sure

14 How do you decide how much to feed horses?

Depend on horses breed Depend on horse's body weight Depend on horse's age

Others please specify:

15 How many stable are there in the club?

Less than 10 11-20 21-30 31-40 41-50 More than 50

16 What material do you use for the stable floor?

Robber Concrete Others please specify:

17 Is there grills between each two stables or a solid wall?

Grills Wall There are stables of both designs

Neither please specify:

18 Do the stables allow the horses have their heads over the door?

Yes No

19 What material do you use for bedding?

Shaving Paper Straw No bedding

20 What are the reasons that you chose this kind of bedding?

21 When the imported horse first come into the club, do you isolate them from the rest of horses?

Yes No → please go to question 26 directly

22 Where do you keep the isolated horses?

In an isolated stable At an isolated field Others please specify:

23 What factors are being monitored during isolation?

Heart rate Respiratory rate Temperature Eating habit Drinking habit
Behaviour habit Weight Others please specify:

24 What is the maximum number of horses can be kept isolated in the club at one time?

Less than 5 5-10 10-15 15-20 More than 20

25 Is the feeding different form the rest of horse during isolation?

No Yes please specify:

26 How often do you have someone to check each horse's fitness? Such as observation of abnormal behaviours, or checking eating and drinking condition, or measure data about RR, HR and so on.

More than once a day Once several days Once a week Once several weeks

Others please specify:

27 What do you do for most of time when you find any fitness problems of horses?

Solve them based on personal knowledge Consult with vets

Consult with horse owners Consult with horses trainers

Others please specify:

III Questionnaire for vets:

1 How long have you been working for this club?

5 years or less 6-10 years 11-15 years 16-20 years Above 20 years

2 Please select the relevant options below that apply to your previous experience:

Working for some other clubs at the same time name:

Worked abroad before country: Have a veterinary practice certificate

Worked as an assistant for a professional vet before

Went to a veterinary school and got a degree in veterinary name of the school:

Went on equine program (such as Darly or Godolphin's programs) before program's name:

3 How often do you give most horses health examinations?

Once a week Once a month Once several month Just exam them when they seems ill

4 What's the averaged body condition score of imported horses when they arrive? (based on the description of the following table:

Condition	Neck	Withers	Back & Loin	Ribs	Hind Quarters
0 Very thin	bone structure easily felt- no muscle shelf where neck meets shoulder	bone structure easily felt	3 points of vertebrae easily felt (see Figure 2)	each rib can be easily felt	tailhead and hip bones projecting
1 Thin	can feel bone structure- slight shelf where neck meets shoulder	can feel bone structure	spinous process can be easily felt - transverse processes have slight fat covering	slight fat covering, but can still be felt	can feel hip bones
2 Fair	fat covering over bone structure	fat deposits over withers - dependent on conformation	fat over spinous processes	can't see ribs, but ribs can still be felt	hip bones covered with fat
3 Good	neck flows smoothly into shoulder	neck rounds out withers	back is level	layer of fat over ribs	can't feel hip bones
4 Fat	fat deposited along neck	fat padded around withers	positive crease along back	fat spongy over and between ribs	can't feel hip bones
5 Very fat	bulging fat	bulging fat	deep positive crease	pockets of fat	pockets of fat

5 What can be used to describe the change of averaged body condition score of imported horses after they are imported?

It goes down dramatically It keeps unchanged with slight going down sometime

It keeps unchanged all the time It keeps all changed with slight going up sometime

It goes up dramatically

6 What fitness level would you use for the average description of imported horses?

Extremely poor poor average good excellent

7 What health issues are commonly seen in imported horses?

Respiratory thermoregulation digestive problem lameness injury colic

gastral ulcer abnormal behaviour obesity weight loss poor appetite
malnutrition others please specify:

8 Which of the following behaviours have you seen on imported horses?

Crib-biting

wood chewing

pawing

kicking



waving



box walking



self mutilation



9 What do you think of the behaviours that you saw on imported horses?

Very serious and I'm taking a lot of methods to stop them

It's bad, but there's not much you can do to stop them

Although it's not good, it can't do much damage neither

It's okay to have these behaviours

Others please specify:

10 Which of the following methods do you used to diagnosis gastral ulcer of horses?

Clinical symptoms Gastroscopy Faecal occult blood and albumin test

others please specify:

11 What of the following strategies do you suggest to be used most when treating gastral ulcer horses?

The environment strategies Dietary strategies and nutritious management

Pharmacological management

12 What is the percentage of imported horses' number takes up the total number of horses you treat?

Less than 10% 11-20% 21-40% 41-60% More than 60%

13 Do you have equine welfare guidelines for treating horses?

Yes No → please go to question 17 directly

14 Where does the welfare guideline you work to when treating horses come from?

Chinese government World animal welfare organization

Personal ethics Others please specify:

15 Do you think this guideline has covered enough areas of treating horses?

Yes No

16 In your professional opinion, what suggestion do you have for the equine welfare guideline?

17 Do you think there should be an equine welfare guidelines to follow?

Yes No

18 In your professional opinion, what suggestions do you have for building an equine welfare guideline?

Appendix 3

Transcript 3-1 Club owner

M: is your working place Beijing?

L: yes

M: please briefly describe your equine related experience

L: I first started to do something with horses only from 2014. Because Qiyu was invested by Dalian Yangyu company. Our investor wanted to do teenagers' riding club. I was doing something else at that time. We started some investigation at 2014. But our investor had already involved with equine industry in 2012 because we have equine business in Dalian which is very standard. We got appointed by the government to run the daily management, feeding and training of this riding club. We know very little about horses when we started the club and lots of mistake were made then. We used to buy dressage horses and hire Taiwan Jockey to train the team. But you know the dressage market is smaller than jumping in China and we did not know that partly due to Dalian is a 2nd level city. During a very coincidence opportunity, our company bought a wine company in France. They knew that we also run equine business at the same time. They suggested us to have a look at teenager riding clubs because he is also a father. I was involved real-state business at that time. Actually, I saw the company when I first got here and I think it looks very good. He (our investor felt the responsibility to do this teenager riding education instead of just thinking riding as a high-class exercise. Before the 8 rules posted by the government, government used to be involved with personal business from time to time and they hold high class reception with us too. Then we did the investigation of Chinese riding clubs which involved some deep interviews with the people within the industry including the business runners, trainers and clients. We also get to know the self-evaluation of the clubs, feedback of their clients and also the arena design. None of us know anything about horses at that time. I was specialized in fast consumption.

M: do you ride?

L: no, I hardly ride even for now. Since our team are all specialized in real state, engineering or other non-equine-related areas. Actually, in 2014, I started planning the business in April and started doing it in September. We still know very little about the business then. We visited the pony clubs in France and we know that it is really hard to make money through it here. But based on two background: the middle-class consumption ability of Chinese is okay, the study we did towards teenager riding and the cultural orientation of the sports business in China. If we do adult riding training instead of teenager, we are not experienced and we don't have the opportunity, the clear direction and the ability to do that. But for teenager riding, due to lack of attention and deep thinking towards that in China, they do not have the specific self-evaluation, standard product and scientific system. Most equine people do that due to their culturally emotional passion and they do not have clear direction of their business. This is a minority business without a lot of smart people in it. So our goal is to import mature ponies and riding systems. The 'import' means gradually change and a slow transfer of the system. At the same time, we used an optimize and kindly invasive attitude to promote and develop ourselves. We want to do branch riding club running and we know that this is very hard. But if we step back and do the basic, standard teenager riding business, we could succeed something.

M: May I know how many membership do you have at the moment?

L: the active membership is more than 800. 'active' means they are within the period of class validity and come for classes at least once a month.

M: what the importation was like last year?

L: we imported 9 horses. They are French ponies. Two of them are stallions and the rest are all used for teaching. We are different from other clubs because we are very focused. We imported 49 horses in total and 40 of them were imported in 2014. I came to France to pick horses personally.

Noting:

The club only focus on teenager riding and it can be seen as pony club similar to the west.

M: when was the latest importation?

L: May or June in 2017

M: what's the average age of imported ponies?

L: 4-13

M: what's the limitation of importing number each time? Why don't you import 49 horses at one time?

L: our need is the first thing to consider. We have 9 companies in China at the moment. New company will need a balance of imported and local horses. This is what we based on. The transportation and quarantine are the next thing to be considered. The warm blood and ponies are different when it comes to the size of the box. The time need to be considered too. It cost less if the time is short. 9 ponies took up 2 boxes. For warm blood, 3 horses are for 1 box. So we import no less than 3 horses each time. Ponies are cheaper than warm blood. The 40 importation of the very first time is due to the calculation we made based on the size of arena, number of stables, rider's number and expected membership size. These are calculated when we built the club. These turned out to be quiet precise and scientific at that time. Because we did a lot of statistical work.

M: is there any government rules affecting your importing number?

L: no, the number actually depends on the transporting and size of isolation box. Time is a very important thing to consider to because horses need to be in another countries isolation box for 45 days and Chinese isolation box for 1 month. If we aim to buy 40 horses, we will need to pick 60 from the start because some of them may not able to pass the test at the isolation box. When they pass the border and enter China, there are agencies in China due with that too. They need you to apply for certificate first so that they could empty the isolation boxes in advance for you. Certain number of staff need to be at the isolation box before head with the coordination from us. This way, we could ensure the health of all the horses. As for our club, 40 ponies need 8 trainers in the isolation box. One person is in charge of 4-5 horses. The size of arena was given a lot of thought too. This is because we are not experienced back then. Statistic was the main thing to focus on.

M: what's the gender of horses you imported?

L: because we did not have professional horse people when we started. We hired people from different clubs who know more about horses than we do. They told us that geldings and mares are better to be used as teaching horses. Stallions are to energetic and not suitable for teaching. Mares

are great too because they can foal. So, all of our horses are geldings. No stallion was imported. Because our business is about teaching kid to learn about riding. The temper of horses is the most important thing to be considered.

M: do you breed imported horses with local horses?

L: we tried two. Only trying. Because we know that the period cycle of breeding is very long. We have clear goal of business and we do not plan to put much time on this. Therefore, we tried very few. During the second importation, I left Qiyu to do a coffee shop business. After I got back, I realize that they want to try breeding. But I do not agree with them on that completely. Because breeding is a totally new area, and if we really do that, I prefer breeding pure blood French pony with artificial insemination. We could try that. Because when I learn about French pony, I found there were history tradition behind that. When they breed new horses, I think there is strict selection behind that. Just like people, we hope one generation is better than the former one. After years of doing that, they have their own rules and training method of breeding which we don't have. I think if we do the breeding ourselves, we may not be able to make profit.

M: do you use agency during the import?

L: we are the first French pony club in China and we have our official connection with French pony association. There are people working there represent us. We built a company in France too. They select ponies with the guide and supervision of state government. Actually, during our first importation, we got support from French organization and government officially. Because we are the very first group that import ponies from France and we are the first official French pony club in China. Before us, all of the clubs use local horses or hybrids to do lessons.

M: what factors do you consider when you are selecting horses?

L: the first thing to consider in my view, I didn't know much about horses then, is shape. It's not about beauty but height. French pony is divided into A (80-107), B (108-130), C (131-139), D (140-149) groups. We consider the height together with Kids' age. Because what I studied is marketing and from that point of view, I consider the kid's age and average height. We know that kids aged 9 plus have more study pressure. Kids at that age need to learn more things. At the same time. in other countries, the youngest kids can start riding from 3-4 years old. So we focused group are kids aged 4-12. With that focused age kids' averaged height, we decide how much A, B, C, D groups ponies we need to buy. That's how we decide the number in the first place.

The next thing to consider is the appearance which includes coat colour and level of cuteness. Lol. Since we import horses, we need to tell the importer the requirements. The French side think it's a little bit weird when we are asking for horses with unique coat colour such as white, black and paint. We want to import horses with coat colour you cannot easily see in local horses.

The third thing to consider is the health condition and ability of horses. Be health is a very basic rule of our importation. The ability of horses is based on the France Pony organization system (gallop). We know the terminal goal of kids here to ride is to do the riding level test. This test keeps the passion for learning. The ability of ponies is important to that. Even though I don't know much, I think only horse with certain ability can bring your riding skills to a certain level.

M: is there any more to consider?

L: that's almost all. Because before our import, the government and organization have clear instruction of the cost of A, B, C, D level horses. The price may change with the difference of the ability of horses. But based on the instruction for the price, there is not much to do when it comes to the price.

M: how do you see the importance of health of horses?

L: I think from the welfare part. This is the first thing to consider. It is not humanism to work unhealthy horse.

M: how do you ensure the health of horses when it comes to the daily care?

L: we tend to get very busy during weekend and lots of lessons are being organized, the schedules of all the trainer are all packed with classes. We will keep an eye on the equipment of horses to see if they are comfortable. On the other hand, I think our club did a great job of ensuring the feeding and shoeing. We will always keep an eye on horses' condition, to see if they are able to work and if they are health. Our riders will do that too. But for more detailed and quantitative part, we will still need to learn.

still quite new. We haven't encountered the imported horses' death yet. Local horses died of illness before. But there hasn't been a standard way to deal with that in China yet. There is no restriction for that neither. Therefore, for the local horses, we just deal with the body by ourselves. But we won't sell the dead body, that's for sure.

M: I know that your club is specialized in French Pony riding. Are you familiar with Chinese traditional riding?

L: that's actually one of our long-term goals. We plan to learn all we can about western riding and plant Chinese traditional riding slowly at the same time. We want to turn what we've learned from the west into what we have in China. Our boss made suggestions before about introducing Chinese traditional riding-and-shooting and national stuff into the club. But we still need time to learn and plan.

M: how do see the future of western riding and Chinese traditional riding? Do you think they will combine together or one over another?

L: I think they will combine together. Almost every country has their own history of horses with regards to the agricultural production, military training and transportation need. When we see France have their French pony games, they are all based on these three parts. Such as put rings on the grills, pick up balls and so on. They are all connected to these three parts. In China, the traditional riding style all have their unique history. They all have things in common. In the future, we could all put them together and have kids riding different kind games. But equitation (horsemanship) is fixed according to the west. But we can add other activities along with that. This can be considered one of our dreams.

M: about more detailed management such as stable management, feeding and all the others, is there any combination of the west and east at the moment?

L: of course. All the Chinese riding club management has difference from the western. Our goal is to think based on Chinese market. For example, in European countries, manual work is very expansive. Group lessons are more preferred. But in China, one-to-one teaching is more popular. In other

countries, family equine business farm is very popular. But it is impossible in China. First, we need to respect both. Then we will try to combine both. And we put that in practise when we come to education as well.

Transcript 3-2: Leading rider

Me: How many riders are there in the club?

Dong: 18 at the moment. They are also riding teachers. 4 intern trainers. They are on probation where they are trained for stable management and riding, if they are qualified, they will be about to teach lessons.

M: do they all need to get gallop certificate?

D: they cannot join the test during training. During the training, we will just see if they are qualified with the regards of their ability and daily performance to decide if they can become official workers. Once they become official works of the club, we will let them join the test and get gallop level certificate.

M: are all the riders in jumping event?

D: we focus on jumping. But we still require the riders to start from basic dressage and do more ranch riding. Based on their ability and interest, we will decide which event they will be in.

M: could you please describe the training plan of horses?

D: we are kind of different from other clubs. First, we have lots of lessons. We still try to squeeze time for riders to have their training and indoor riding lessons. Stable training will be conducted too. Each week, we rest horses on Monday. Lounging is the mainly used training method Tuesday because horses are little excited after one day rest. We suggested riders to exercise horses to ensure horses' health. Wednesday to Friday, each riding lesson lasts for 45 min to 1 hour and 10 min. During this time, we focus on basic ranch riding and jumping and our jumping height is under 1 meter. We arrange that according to horses' and riders' ability. Ranch riding is a way to help us know about horses and is the basis riding we need to do before jumping. During these 3-day's we use 1 day to do ranch riding and 2 days to do jumping. Weekend are the lessons-booking days. But we still try to allow horses be lounged if there is no class. We also suggested them to lead-walking the horses. It depends on the riders' plan.

M: how many lessons on average does a horse have each day during a week

D: we have 70 horses in total, 40-50 horses among them have around 5 classes each day. 6-7 classes tops. But the intensity of exercise is very low since they are all basic riders.

M: how long does it take for horses to get used to the new environment and have class after they are imported?

D: For ponies used for teaching., since we bought mature ponies mostly and there is quarantine period after they are imported. They need 1-2 months to get used. During this period, we will lounge them and ride them to help riders to know the horses. We will also try to find the right kids the right horses. There won't be a large amount of exercise.

For competitive horses (warm blood), we put them into regular training right after they are imported. Because the riders' riding skills are okay and they just need some time to adjust themselves instead of getting used. We will adjust horses and riders during that time.

M: what do you think of the fitness level of imported horses?

D: in the first 1-2 months, we think the horses' fitness level is okay due to their long time resting. They may be lazy and the movement is not very smooth. After that 1-2 months, they will be able to get back to the fitness level before import which is good.

M: about horses' behaviours such as crib-biting, weaving, boxing waking and self-mutilation. What is the condition like with the horses in your club?

D: they are not very commonly seen in this club. Taking boxing walking for an example, it may due to keeping horses in stable too long without turning out, so that they develop behaviours like this. The other situation may be that horses are born energetic and this behaviour helps them to relax. But if they keep doing that, this will become a bad habit.

Crib-biting is partly due to some physical organs go wrong and their feeding is not good. They swallow some are before they eat. This is not commonly seen in our club. I know that horses can bit grills or wood at the same spot over and over again till it gets ruined. We will use the collar to deal with that. But this can just reduce the frequency but not cure this behaviour completely.

Weaving may also due to the lack of turn out. This hasn't been seen in our club because our horses are out of stable every day. The reasons for that behaviour I'm sure will need some deep studies. I haven't seen any in my club but I did saw it in other clubs before.

Self-mutilation is very rare. Horses will find their friends through smelling. When the smell is not right, they will kick or fight. This could cause damage to themselves. This could be considered self-mutilation. But if it's just they hurt themselves for no reason, it is very rarely seen.

M: that is all I want to ask about training. Besides that, I would also like to ask about stable managing.

D: we have 70 horses and we keep some of them in a group. Therefore, we only have 56 stables. We feed them 3 times a day and add hay 4 times a day including 1 night feeding. The hay for each time is 1.5-2 kg. The feed for big horse except A, B ponies each time is 1-1.5 kg. 1.5-2 kg for warm blood. Competitive horses need lots of energy daily and they can double the feed compared to ponies.

M: what kinds of feed and hay?

D: we feed Chinese wild rye, which grow out in the wild. Alfalfa is another good chose but can be too pricey. We still need to consider the costing when it comes to feed. Alfalfa is good but cannot feed too much. It will make horse hot. But Chinese wild rye won't, which is good. With the development of economy, we need to be more efficient and for the feed, we selected concentrated feed. We used to mix up feed ourselves which can have 5 kinds but need time. Concentrated feed is easier to feed. But the nutritious of it may not be as good as the mixed feed.

M: how did you decide what to feed in the first place? Did you gather suggestions from other people?

D: it was usually decided by our vet and stable manager. Because they pay attention to the feeding. Vet and stable manager are one person in our club. He is responsible for the feed chose.

M: how did horses' figure change after they are imported? Is there difference between when they are imported and 3 months after import?

D: during these 3 months, the total fitness won't make a great change because they don't exercise much. They are fed and relax for most of time. After 1 years of training, the fitness may change but not certain. With different training and other changes, the figure may change.