

**A Small Qualitative Study on the Effect of Cultural Differences on Well-Being of  
International PhD Experiences**

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### **Abstract**

This thesis investigates the work environment of international PhD students. In the academic environment pressures are high, influencing the well-being of the scientists negatively. For international PhD students there is this extra influencing factor, namely culture. In a small qualitative research study ( $N = 9$ ) at the BSS faculty (University of Groningen), I asked international PhD students in an interview to report on their experience in order to try to answer the research question: 'How do international PhD students experience cultural differences in their work environment and how do they perceive the relationship between these differences and their well-being?'. Even though participants reported that cultural differences were present, they were most of the time not perceived to influence their experience, nor their well-being. In these experiences, the evaluation was individual: every participant experienced cultural differences in a different way. Additionally, other factors related to the work environment (i.e., personality, Covid-19, the PhD itself, and the supervisor) and factors outside of work (i.e., social network, the governmental system, moving, and weather) were reported by the participants to influence the experience and well-being more than cultural differences. In the future, experiences should be evaluated individually since every person is different and factors vary in the extent to which they affect the individual.

*Keywords:* international PhD students, cultural differences, work environment, well-being, individual

## **A Small Qualitative Study on the Effect of Cultural Differences on Well-Being of International PhD Experiences**

In modern academia, the workload has increased. This is due to contributing factors such as the command to keep contact with students and the reward system of scientists (Houston et al., 2006; Kenny, 2018; Akca et al., 2020). The reward system is based on their performances. For example, the more you publish and the more citations you receive, the higher your reward is going to be. Factors like these do not only increase the workload, but also increase stress levels in the work environment (Kenny, 2018). Pressures are starting to exhaust scientists and they are becoming more and more vocal about their issues (WOinActie, 2019). Sleep deprivation, anxiety attacks, burn-out, physical complaints, and social isolation are effects on the mental and physical well-being (WOinActie, 2019; Tijdink et al., 2013). In the work environment of academia, PhD students are working towards a career to become a scientist. They are working on a doctoral dissertation, which contributes to the knowledge base of the scientific world, but also lays the foundation for their academic career (Roach & Sauermann, 2010). Over a period of 12 years (2000-2012) the number of PhD students grew with 56% worldwide (OECD, 2014).

PhD students are also exposed to the workload and pressures of the work environment. Recent studies have shown that stress and dissatisfaction are rising among PhD students (Kulikowski et al., 2019; van Rooij et al., 2021). A large amount of PhD students is, for example, suffering from anxiety and depression (Evans et al., 2018). Contributing factors to this dissatisfaction come from all sorts of sources: publication pressure (Lei et al., 2009; Haven et al., 2019; Pyhältö et al., 2009), supervisor support and leadership styles (Devine & Hunter, 2017; Levecque et al., 2017; Harman, 2003), and work-life balance. A bad leadership style (i.e., little support and little involvement) can cause stress in PhD students. In contrast, when the supervisor has an inspiring, involved leadership style, it can decrease the stress levels of the PhD student. Even time management plays a role in the outcomes of PhD students' mental well-being (Barry et al., 2018). Being behind or exceeding schedule interfered with high depression, anxiety, and stress rates. Because of all these pressures, 33-

70% of the PhD students never even finishes their PhD (Jones, 2013). The study of Castelló et al. (2017) showed that one-third considered dropping out, because they could not balance work and life or were dissatisfied with their social life.

For PhD students who decide to do their doctoral journey in another country, there is the additional source of adjusting to a new culture adding to the complexes of the work environment. Even when the geographical distance between the home and host country is small, there exist considerable cultural differences (Tempelaar et al., 2012; Hofstede, 1986). International PhD students may experience these differences when aspects of the new culture, like the educational system, expectations, and behavior, differ from the characteristics of their home culture. Their whole environment is influenced by the host culture. This may cause a culture shock (Zepke & Leach, 2005; Zhou et al., 2008). Symptoms due to culture shock can be loneliness, depression, and homesickness (Brown & Holloway, 2008). When the original culture has a different character than the host culture, this might influence how you cope with events during the academic journey. Cultures can have, for example, a masculine or feminine character. When the home culture has a masculine character, students tend to experience more competition in their education and focus on high performances. Failing is then seen as a horrible event. In contrast, students from a feminine characterized culture are more modest. They strive for excellence but are not abundant about it. Failing is less internalized and perceived as incidental (Tempelaar et al., 2012; Hofstede et al., 2010). A study on Chinese PhD students in The Netherlands showed that the adaptation to the Dutch academic system and living environment can take up from 12 to 18 months (Chan, 2018). In this period of adjustment higher stress levels are present, which influence the psychological functioning of students (Mindlis & Boffetta, 2017). When the adaptation does not succeed, it can lead to the PhD students dropping out and finishing in another country. Tinto (1975) showed that students focus on numerous areas to adapt to. Not only do they want to succeed to graduate (i.e., academic integration), but they also want to be part of the student culture. Thus, they strive for social integration as well. Baker and Siryk (1999) added two more adjustments to this: personal and emotional adjustment. These adjustments

reflect the psychological and physical distress students experience while adapting to the new academic life. These adjustments positively influence the study progress and performance of students. There are little differences known between Dutch students and other European students, due to cultural similarity (Ward & Kennedy, 1996). When there is a lot of cultural dissimilarity, international PhD students may experience higher stress levels. What is different for international PhD students compared to Dutch PhD students, is the participation in social activities due to the language barrier (Rienties et al., 2011). Because of the barrier, international students report to have more contact with other internationals and little contact with native students. They find it hard to participate in any social activity. This leads them to participate in merely study-related activities, while they desire to have a more integrated social life besides study-related activities. In the cultural adaptation to a non-English speaking country, there is both the language barrier with the English language and the native language of the host country. Even though it is desired to learn the native language to feel more integrated, the language barrier with English is already difficult for some. This is therefore prioritized, because it is important for their research and performance as PhD students (Chan, 2018).

Also, in the relationship between the PhD student and their supervisor culture can have an influence. In the research of Chan (2018), PhD students reported to experience cultural differences in how the power distance is present in the relationship and how they struggle with this. For Chinese students for example, the power distance is bigger in China than it is in The Netherlands. This more egalitarian relationship is more present in Western cultures (Cortazzi & Jin, 1997; Wang & Li, 2011). Cultural differences can also influence the interpretation of feedback (Madan, 2021). It may lead to miscommunication in the interpretation of feedback when the expectations of the PhD students and the means of the supervisor don't align (Wang & Li, 2011). When receiving critical feedback, this can be perceived as emotionally difficult, negatively influencing the academic performance (Caffarella & Barnett, 2000). Embedded in this is the home culture of the student. Not in all cultures is critical feedback normal. When this is the case, feedback can be challenging for the

PhD candidate to interpret. When the interpretation is counterproductive, it can be harmful for the PhD students' self-esteem. This in turn can lead to negative consequences for the PhD students' learning outcomes (Hyland & Hyland, 2001; Wang & Li, 2011).

In this thesis, I will investigate the topic of cultural differences influencing the PhD student, both in their work environment and in their well-being. Literature argues that PhD students are exposed to a lot of pressure in the work environment and that this can have serious consequences for their well-being (Akca et al., 2020; WOinActie, 2018). Moreover, international PhD students may experience an additional pressure factor, namely culture. The current study will investigate cultural differences in the work environment of the faculty of Behavioral and Social Sciences (BSS) at the University of Groningen. The research question for the study is as following: 'How do international students experience cultural differences in their work environment and how do they perceive the relationship between these differences and their well-being?'. It is important to have knowledge about whether this is an issue for the PhD students at the faculty, for the university desires to prepare the scientists in the best possible way for their career and the future of science. In this case both the scientist and the scientific world receive the best outcomes. Well-being problems do not support these desirable outcomes. Findings may give us clarity on the current status and give us insight into what is needed to create a healthy work environment for PhD students.

## **Methods**

### **Research Design**

As a group of three students (Tessza Badric, Niklas Kranz, and Ilona Breeuwsmma), we set up this study and collected the data. We decided to do a qualitative study because there was a need for deeper exploration of the mechanisms of PhD candidates' experiences to enrich the well-being surveys done by the University of Groningen. Qualitative methods describe lived experiences in a more detailed, nuanced, and realistic way than a quantitative analysis. Likewise, we chose a thematic analysis with an inductive approach, as it gives the flexibility to identify and interpret patterns or themes given by the data set (Braun & Clarke

2006). That is, we did not try to fit the data in a predefined coding scheme. Instead, we searched for patterns in the data to create themes.

### **Participants**

In total, we included nine participants in our study. Sampling until theoretical saturation was not possible due to limited time. To solve the ontological question of how to group different cultures, we decided to separate cultures by nationality like Hofstede (2011). Due to cultural similarity, we excluded Dutch and German PhD candidates from our participants. To select our international participants, we made a list of all PhD candidates at the BSS faculty of the University of Groningen. From this selection, the Dutch and German nationalities were excluded based on a look at their names. The remaining people got an invitation email from us. This resulted in a total amount of 36 invitation emails. In the email correspondence, we asked the following four questions: 'What is your nationality?', 'How long have you been doing your PhD?', 'When did you move to Groningen?', and 'Are you a bursary or employed PhD candidate?'. Based on this, we then invited the PhD candidates who did a PhD for at least one year and were living in Groningen but did not do their masters in Groningen. With this approach we were able to select six participants. After not finding enough participants, we decided to loosen our criteria. PhD students who had already finished their master's degree in Groningen were now allowed to participate, as well as first year PhD students. Included in the study were five participants from China, one from Mexico, one from Turkey, one from Columbia, and one from Indonesia. One of these participants was a first year PhD student, one was a second year PhD student, three were third year PhD students, and four were fourth year PhD students. Three of the students had already done their master's degree in Groningen.

### **Interviews**

Out of nine interviews, four interviews were done online through Google Meet and five interviews were done in person. The duration of the interviews was between 30 minutes and 75 minutes. We sent all participants the informed consent form and study information form before the interview. At the start of the interview, we asked the participants whether

they agreed with the informed consent and the interview being recorded. The online interviews were recorded in the Google Meet environment and the in-person interviews were recorded with an audio recorder. The audio recordings were encrypted and stored on a university server until the end of the research, and were only accessible by Ilona Breeuwsma, Niklas Kranz and Tessza Badric. The audio files were deleted after the study was completed. The study had been approved by the Ethics Committee of Psychology at the University of Groningen (code for approval: PSY-2122-S-0013).

We conducted the interviews using a semi-structured interview guide. We asked all questions in the interview guide unless it was already answered during a preceding question. An exception for this was the question “If you imagine an ideal work environment, how does it look?”. This question was accidentally not asked to the participants of one interviewer. During the interviews we had the freedom to deviate from the interview guide by exploring further promising answers. For example, when a participant indicated (strong) emotions on a topic, the topic was further explored. The interview guide included three main elements: (1) questions with a focus on how the PhD candidates experience the work environment at the faculty in general, (2) questions focusing on how cultural differences are experienced in their work environment, (3) questions that evaluate how well-being is perceived to be influenced by cultural differences in the work environment. The full interview guide is included in the Appendix.

We manually transcribed the interviews using the program F4 Transkript. Unless requested otherwise by the participant, interviews were written down word by word. Such a request was made by one participant. Non-verbal language, such as laughing, was added when it was influencing the interpretation of the text. In the transcripts, we pseudonymized the participants using different names than their own. These names are also used in the results.

### **Data analysis: coding**

We based the data analysis on the inductive approach of Braun & Clarke (2006). Our

thematic analysis started with reading all the interviews and highlighting the data relevant to our research question. We coded these parts in detail, trying to stay as close to the text as possible. All nine interviews were then discussed in depth with the whole group. Due to different interpretations of the interviews in our research group, we faced difficulties with coding. Our main struggle was to agree on the emotional weight of certain statements. This was resolved by giving more value to the interpretation of the interviewer, since they knew the interviews' sentiment best. Therefore, we eventually agreed on common codes which reflected the content and the meaning of the interviews. Based on our descriptive coding, we looked for patterns in our interviews and grouped our codes according to them. Eventually, we merged our grouped codes into more abstract themes and agreed on a theme scheme together. The process of agreeing on a final theme scheme was challenging due to difficulties with the organization of the themes. This was due to a high interconnectedness between our themes and sub-themes. The final scheme can be found in the Excel file attached.

### **Researcher reflection**

During a qualitative research study, it is important to reflect on my role as a researcher and to be aware of what influence I might have had on the outcome of the study. Since I was unfamiliar with the contemporary situation regarding the impact of cultural differences before the start of the study, the literature review was important to my knowledge about the topic. Even though I feel like I was familiar with the literature about the topic, I still feel like I was steered by it. An example is when participants answered not to experience cultural differences in their work environment, I gave examples of cultural differences from the literature. Although, I felt like it might help the participants to 'think in the right direction', I realized during the interviews that this had the opposite effect. It made participants reflect on the examples, while instead I wanted it to inspire them and help think of more cultural differences in their own experience.

Additionally, I caught myself steering the conversation by prompting negative experiences, influenced by my assumptions. When participants mentioned, just like the previous example, that they were unfamiliar with the negative experience of cultural

differences, I noticed that I still wanted them to think of something. However, we still think we created a supportive interview environment and that the interviewees were free to express their opinion. This made it possible to build a comfortable and friendly relationship with the participants, while still keeping it professional.

### **Results**

Two main themes resulted from the thematic analysis.

#### **First main theme: International PhD students perceive some common cultural differences in the Dutch work environment, but how these cultural differences are experienced is individual**

This theme captures to what extent the cultural differences in the work environment seem to influence the experience of the PhD students. Even though it seems that there are common cultural differences experienced, to what extent this influences the individual experience, depends on the person. Thus, this theme identifies individual differences in the experience of cultural differences. This theme can be elaborated upon using three subthemes.

##### ***Sub-theme: Few personal relationships in the work environment***

When it came to the social interactions of the participants, one of the aspects was that there is a clear separation between work and social interactions in the Dutch work environment. A separation between personal socialization and professional work talk, with the professional work talk especially present in the work environment. Woven into this separation is a perceived cultural personality trait of Dutch people, namely that they are not that personal. Although, the Dutch work environment is experienced as a friendly environment, in the interaction with colleagues there are no deep, personal conversations, supporting this separation between work and social interactions: "Then in communicating with colleagues, we don't do deep talking, you know. It's always like 'oh, how are you'" (Mia). Some participants reported to desire a more personal relationship with their colleagues, while for others this was less of a priority: "I don't feel really inclined to socialize and to make friends with people at work [...] that is also what impedes me from making friends and from having a social life at the department" (Noah).

Additionally, the language barrier in the work environment also adds to this separation. First, the English language is not the native language for the participants. But in the meantime, the English language becomes their most used language at work. Especially in the first stages of the PhD the language is something to get used to: "At the beginning it was even with English [...] I mean I didn't know any Dutch, but even trying to communicate in English was complicated because I never really used English at all in my country" (Noah). Also, speaking not in your mother tongue can sometimes make you feel uncertain whether you are being understood correctly:

"I just feel like in our language if we say, for example if we say one thing, it means A. But here if we say one thing, it means B. So sometimes I just feel like it is confusing. You never know if what, if you aid this right or if people can understand you as you want them to" (Sophie).

While for some this issue resolved after getting used to the language, for others it keeps on being a topic they do not feel comfortable with: "Maybe even now sometimes I struggle with it" (Mia).

Second, Dutch colleagues speak Dutch among each other makes them not easily approachable. Not being able to understand your colleagues or not being able to join in their conversation, can make the PhD students feel uncomfortable, increasing the language barrier. This also makes socialization with colleagues more difficult: "Maybe if [...] they would speak more in English then that would motivate me more to socialize with them" (Noah). Even though the language barrier was a broadly discussed topic, the degree to which it is perceived as a problem is individual. There were also participants stating that the language barrier does not affect them negatively.

A third aspect is that several participants reported only a small amount of collaborative work with their colleagues. This lack of scheduled interaction decreases personal socialization with colleagues, making it more difficult to form personal relationships with colleagues. However, the desire to collaborate more with colleagues exists: "I would rather have more social life and more collaborative work" (Peter).

***Sub-theme: Independence in Dutch work environment regarding work***

A typical characteristic of the work environment that a lot of participants mentioned is the independence. Compared to how the participants were used to independence in their native cultures (or not), this was therefore reported to be a difficulty to some extent. The effects of independence can be elaborated upon in three work aspects.

Firstly, scheduling your work for yourself was mentioned by numerous participants. In the four years of your PhD, there are only a few set deadlines. For the rest of the time, you have to make your own agenda. Also for this aspect, how it is experienced is individual. It can create feelings of uncertainty: “In some way everything seems to be structured [...] but not for your working day to day [...] Like that is a little bit more messy [...] Yeah, this uncertainty, this lack of structure” (Noah). The majority reported to be struggling with scheduling: “I need more from my professor. It is difficult for me to totally depend on my idea. I need more, erm, structural guidance” (Olivia).

Secondly, there is reported to be less hierarchy between the PhD student and their supervisor: “The professors in the university are also not hierarchical [...] they treat students very equally to them” (Blair). In The Netherlands, you as a PhD student have a leading role in your own project: “I’m the expert of my research project” (Adinda), meaning your supervisor is not going to tell you what to do. You have to be independent and seek help when you need it. This is also perceived as a cultural difference: “I found different with [home country] and in here. The supervisor is the expert there, but here they put themselves not the expert. They put themselves as our colleagues” (Adinda). This aspect has been evaluated as positive by all participants that discussed the topic.

For the third aspect, there seems to be ‘a Dutch way of asking questions’, while this is not common in all cultures: “In our culture we would like to solve the problem by ourselves. [...] So, if we have a question, we don't like to ask people directly. Instead, we will figure it out by our self” (Sophie). When not used to this question asking, it can cause feelings of worry: “I may feel a little bit worried that I propose a very stupid question or a very simple question” (Melany). In the Dutch work environment, however, questions show curiosity and interest in

your work. It is not personal and not meant to negatively evaluate the person. This typical aspect of the work environment is perceived as helpful: "Because they [colleagues] are pretty helpful" (Sophie).

***Sub-theme: A 'Dutch' productivity***

One clear recognized cultural aspect of the Dutch work environment is something that can be called productivity. This consists of an attitude that creates an efficient working climate. There are examples that elaborate upon this productivity, namely time efficiency and directness in communication.

Dutch people value time. It is clear what needs to be done and what is needed to accomplish: "Dutch people are really organized and when they say they will do something within a time frame they simple do it" (Peter). It is in some way all organized: "For example your calendar is always linked with your work email. They send you something then you suddenly have there an appointment" (Noah). Linked to this, is punctuality. When there is an agreement on a deadline or a meeting time, Dutch people take this very seriously. This is also a cultural aspect: "Like in [home country] for example there is, there is not such a big problem with being a bit late. Here it is quite a problem." (Noah). Also, in The Netherlands are clear lines of when you are expected to be working and when not:

"A lot of PhD students there will be working at night and in the weekend. So, when coming here, I found that most of the people don't work at night or in the weekend [...] I learned that here I only need to work hard and in daytime [Monday to Friday]" (Mia)

Furthermore, Dutch people are perceived to be direct and straightforward in their communication. Something positive evaluated about this, is the efficiency and how it can take away uncertainty for you know what you are up against: "I really love the Dutch culture like to be very straightforward in communication. And like being both friendly and straightforward makes the communication very efficient. Also ease a lot of insecure of uncertainly and anxiety" (Blair). This directness is also present in feedback. In the Dutch work environment, it is normal to give critical feedback. The evaluation of this criticalness

includes more variety. There are positive evaluations: feedback is detailed and informative. However, it is also perceived as judgmental. In that perception it can increase insecurity: “That's really judgmental, and that's really, sometimes I feel like ‘oh, that I am not enough to do, I am not enough to finish my PhD, I am a really bad PhD student’” (David). This criticalness can include some negative feedback. Even though this does not mean that you did a bad job, it can still be interpreted like that when the PhD student is not used to this:

“The feedback was like “nothing makes sense” kind of, and it doesn't have structure, there is no point, and I was like “\*\*\*\*\*”, so yea I felt basically destroyed, [...] I know that someone from [home country] would feel attacked and feel very bad about themselves, getting this much feedback” (Peter).

### **Second main theme: Small perceived effect of cultural differences on well-being in the work environment**

Even though cultural differences demand some struggles in the transition to get used to these differences, it is in most cases not perceived to affect the well-being of the participants. Most of the time, these struggles gradually disappeared with time. That doesn't mean, however, that cultural differences can't influence well-being: “I had been depressed for three years [...] it's also related to my PhD” (David). And even if the cultural differences do have an influence, there might still be other factors more influencing. Because the participants are also in a different cultural environment in their daily life outside of work, it is perceived difficult to point out where the affect takes place. Not all influencing factors seem to be due to culture.

#### ***Sub-theme: Other factors at work influencing well-being and PhD experience***

Besides cultural differences, the personality can also be part of the influence. Your personality can for example influence how you handle the situation. If your personality is not easily triggered to be negative (or positive), this affects your overall evaluation: “I think I'm a positive person, so I don't experience that much negative” (Mia). Furthermore, doing something that feels close to you has an effect on how you experience your PhD: “Starting to

research a topic that was closer to my [...] personality, to my interest was already quite motivating” (Noah).

Another (contemporary) influence at work is Covid-19. Consequences of the pandemic have a huge influence on how the PhD is experienced. For example, for the majority of time there is the rule to work from home. But even when you're allowed to work in the office, there are limitations regarding contact with colleagues, decreasing social interactions with colleagues: “For some colleagues we do have very close relationship. But for some it is just, I haven't had the chance to talk with them also because of the Covid” (Sophie) and can increase negative emotions. Stress, uncertainty, anxiety, and loneliness were common among the participants:

“Especially with Covid now that we have to work from home. So that made it even more chaotic, because you don't have the strict working hours, and no one is checking on you [...] the loneliness as well. Because you have to work by yourself” (Noah).

Of course, there are also aspects of the PhD itself that have an influence on well-being. For some, doing a PhD comes with pressure due to independence:

“There is also not like a proper system to, to ensure that you cannot divide a bit more equally the amount of work, you know? [...] but no one tell you like, come on stop a little bit because you're using too much time here [...] then only when you are in the final year, like, yeah now you need to rush because you have to publish all this” (Noah).

And also, that you have to accomplish something: “For now I only have one publication. So still a lot to do, I need three other papers. But I have only one year left. So, I think this is quite a burden for me, yeah” (Olivia). Interestingly, the effect of pressure seems to have an individual aspect, since other participants reported not to experience pressure in their work environment:

“They don't talk about publications or accomplishments. I don't have a perception that the publication or the progress is very important [...] they always have to slow me

down. I have to balance my work and life well and finish the project, no matter how fast” (Blair).

During the four years of the PhD, you are supposed to make progress with your project.

Whether it is going well or not also influences your well-being: “My wellbeing here in general I think is nice. I think it’s mainly because my project goes well. I think every step in the progress of my project gave me very positive emotion” (Mia).

Finally, the relationship with the supervisor has an influence on the PhD student. The role that the supervisor has, can affect the experience positive or negative. When the relationship with the supervisor is good, PhD students are generally more satisfied:

“I was very lucky and I have a really good relationship with all my supervisors and we have developed a really close friendship with them [...] when I talk with my friends that are also doing their PhD, this is not the same experience [...] that’s why I feel [lucky]” (Peter).

When the relationship with the supervisor is not good, there seems to be an opposite effect:

“My supervisor doesn't care about my feelings, he focuses on what you do and what you are planning to do, that's all. It doesn't matter how you feel” (David).

***Sub-theme: Factors outside of work related to being an international influencing well-being and PhD experience***

Also, factors outside of work were reported to affect the experience and well-being. The first factor is regarding social networks outside of work. PhD students mentioned that it’s not always easy to find a network that satisfies them. Also, that it is not that easy to connect with Dutch people: “They already have their network in the city, with their family, a network outside university. For him it is very easy to say, ‘I don't come here to make friends, I come here to work’” (Peter). Then, it also easier to find friends that fit within your comfort zone, even though this is not always what satisfies you. Most of the time this means that the PhD students were part of some community with a similar cultural background: “It sounds good because we can [speak native language] [...] but I think it has actually isolation, because we already have a community, so that's a little bit like kind of blockish to call out and meet other

people” (David). Despite, most people having friends from similar cultural background, there does exist a desire to make more international or Dutch friends: “My advice is you can also try to make more international friends, not only like me” (Mia), “I don't have Dutch friends, that's sad to me” (David).

Dutch PhD students also don't have the influencing factor of getting used to a new system. They know what the government can provide, how the educational system is build up, and have more insight in what their future career opportunities are: “I think the Dutch is more used to the culture and to the system, for them everything goes more naturally [...] as an international everything is more fuzzy [...] I think I have much more uncertainty” (Peter). Especially job perspectives seem to be worrying a group of PhD students. They feel uncertain about where to go and what options there are, since they are not familiar with the career environment in The Netherlands:

“I haven't defined my life, I don't know, I have preferences, but there is also the option that I have to return to [home country] [...] I wouldn't really know where to start, and I feel like Dutch PhD students have this more figured out” (Peter).

The last factor to influence well-being more is moving to a new country. Moving to a new country that you are not familiar with, has its challenges. First, they speak a different language, so you have to get used to that (e.g., learn some words). Another part is Dutch habits that you don't know or that might contradict with your own cultural habits. Lunch was a topic among some participants that showed how culture can differ:

“How disappointing is the food and the lunch, people from [home country] are used to having a big lunch [socialize], and here people just eat bread with something, with a piece of cheese [...] That is why I miss so much having lunch because having lunch is a great place to create some closeness” (Peter).

The last aspect, related to moving to a new country, is missing home and family. Even though in general, living in The Netherlands is perceived as a positive experience, there still is an underlying feeling of homesickness, that pierces through the experience every now and then. Especially during winter days: “In winter there is like, it has a short daytime, right? And after

the office it is totally dark and rains a lot. When I bike to home or walk home in the rain, I will miss my family” (Olivia). The climate also seems to influence well-being when the original climate that the PhD student is used to, is the opposite of the Dutch climate. Characteristics like the lack of light can increase depressive emotions: “It really affects the moods of people and the experience of life [...] it was not even the coldness. But it is the lack of light. Yeah, it was depressing me so much” (Noah).

### **Discussion**

This study first looked at how international PhD students at the BSS faculty experience cultural differences in their work environment. Secondly, it looked at how they perceive the relationship between these differences and their well-being. There are certain cultural differences that the majority of the participants experience in their work environment (e.g., hierarchical gap, language barrier, and independence). However, these differences do not affect everybody in the same way. To what extent they are influencing the personal PhD experience, seems to be individually evaluated depending on what the PhD students are used to in their native cultural norms or how their personality is processing them. Previous literature told us for example, that PhD students might struggle with a different hierarchy in the host culture than what they are used to (Chan, 2018). Almost all participants reported on the hierarchical gap, but in contrast to the expectations, it was not negatively evaluated. Clear from the results became that the hierarchical gap is small in The Netherlands. This leads to more responsibility, independence, and freedom for the PhD students, all experienced positively. Of course, it has its difficulties, since it is new compared to previous education, but it's also worthwhile, exciting, and mature, like you're really becoming a scientist.

An interesting topic discussed by a lot of participants was about the social interactions with colleagues. Numerous aspects were reported to influence the interactions: language barrier, Dutch cultural habits in communication, and social life outside of the work environment. Previous literature by Rienties et al. (2011) also argued that international students might experience difficulties regarding their social life. Confirmed by the

participants is that it is difficult to engage with native students and colleagues. When native colleagues are together, the language barrier becomes visible when they speak their native language with each other. They are hard to reach for a conversation when they do this. Beyond the literature, the participants report that this is also caused by the fact that Dutch colleagues already have a social network outside their work environment and that they don't desire that much personal communication. This lessens their need to develop personal relationships at work as well. As a result, international PhD students build personal relationships more quickly with other international students. However, science does claim positive effects could arrive from interaction with natives (Neto, 2020). Interaction with domestic students positively influences academic satisfaction levels of international students. These interactions may help them in their adaptation process as it provides possibilities to increase their social connections with the host culture, more to their satisfaction.

Cultural differences also are not perceived to influence the well-being according to almost all participants. Even though cultural differences can influence the PhD students' well-being to a certain extent, most participants reported to get used to the cultural differences with time, after which they were not perceived as an issue anymore. This confirms the findings of Mindlis & Boffetta (2017). According to them, the first phase of cultural adjustment causes the most stress, after which these levels lower and stabilize with time. The studies of Zepke & Leach (2005), Zhou et al. (2008), and Brown & Holloway (2008) found that PhD students might experience psychological symptoms, such as loneliness, depression, and homesickness due to a culture shock. Even though these symptoms were present and reported to be caused by the Dutch culture, it was not as serious as a culture shock. Learning a new culture was more perceived as fun and even though new cultural habits are not always easy to get used to, time usually took away the negative consequences of adjusting. Results of the study done by Brown and Holloway (2008) have also shown that not everybody experiences a culture shock, depending on their motivation, personality, and previous learning on cultural experiences.

Other factors at work are perceived as a bigger influence on the well-being of PhD students. One of these factors is Covid-19. Restrictions caused the environment to change, affecting the PhD experience. The fact that this study was done during the pandemic, might interfere with the interpretation of the results. Even though the virus is relatively new, the results of the influence on the mental health are concerning. In the study of Copeland et al. (2021) they found that the pandemic has a negative influence on the behavioral and emotional functioning of students. Psychological symptoms such as insomnia and a low mood increase during a crisis like Covid-19 (Yang et al., 2020). Students of any level of education have been exposed to lockdowns multiple times. In this period of insecurity and social isolation anxiety, depression, and suicidal thoughts rates have increased rapidly among students (Kaparounaki et al., 2020). The PhD students from this thesis study also mentioned to experience negative consequences from the pandemic. Participants reported to feel more anxious and depressed, experience more sleeping problems and less social contacts. However, students also reported that they thought the effects were due to covid, but that it is difficult to rule other things out, since work, pandemic, and social life are hard to separate from each other. Covid-19 is in this study a strong mediator on the mental well-being of the PhD students, so it should be kept in mind for interpreting the results that cultural differences should not be ruled out as a factor that is not influencing the well-being.

A limitation of this study is that this was the first time I practiced qualitative research. Even though I had prepared myself the best possible way, during the study I was still learning so much about the research approach. This might have resulted in the fact that this study is not a perfect qualitative research study. Also, time pressure from finishing the deadline of the thesis interfered with the process of writing and analyzing. For example, for the data analysis we had a relatively short period of time, while this is such an important part of the research. In my opinion, the analysis could have therefore been done more thoroughly, would there have been more time. Additionally, the results of this study were our interpretation of the interviews. This means that if another group of people would read through the same interviews and do the analysis as well, a different conclusion might result from that analysis.

A randomized controlled trial (RCT) could be done to confirm the current results. In this trial, a group of Dutch PhD students could be included to compare whether the results of this study are really due to cultural differences in international PhD students. Also, an RCT should include more participants to reach theoretical saturation. Then, better conclusions can be drawn to give more meaningful data about the impact of cultural differences on the well-being of PhD students.

During the period of data analysis, I noticed that the interviews were missing some crucial (follow-up) questions and that we as interviewers, were unexperienced with doing interviews. For some topics discussed in the interviews, this meant that there sometimes was not enough information to understand exactly what the participant meant. Most of the time with reading through the other answers of the participant's interview it became clear what they were trying to say, but this may have resulted in the fact that some details were misinterpreted in the analysis. More practice with interviewing and designing interview guides might solve this limitation in the future.

Due to cultural similarity, we decided to exclude German PhD students. Even though it was right to do so by the aims of our study, Tempelaar et al. (2012) and Hofstede (1986) claim that even when two countries are geographically close to each other, cultural differences still exist. Literature also supports this. Even for German PhD students moving to a country like The Netherlands, can still have an impact (Tempelaar et al., 2007; Tempelaar et al., 2012; Hofstede, 2001). An interesting topic to investigate in future research could be the difference between similar cultures to the Dutch culture (like the German culture) and cultures that are very different from the Dutch culture. Findings might inform us on how soon difficulties from cultural differences exist in international PhD students.

From the results of this thesis, it is important to remember that every PhD student experiences their work environment differently. The PhD student and their work environment should be aware of the impact that cultural differences can have on the life of the future scientists. If any difficulties could be cleared or improved, this would contribute to the academic quality of the university and its employees. To optimize their academic and

personal development, it should be an open topic of discussion in the future. Universities could be advised to include the impact of culture in the support agencies that already exist for PhD students.

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## Appendix

### Interview Guide

Give a short introduction about our research.

How do international PhD students experience the **cultural differences** in their **work environment** and how do they perceive the relationship between these differences related to work and their **well-being**?

- Did you read the study information form and the informed consent?
- Do you agree with what is stated there?

#### Intro

*Goal: Small impression of personal PhD experience (keeping it easy)*

- > If I were to start my PhD next year, how would you describe what doing a PhD is like to me based on your own experiences?
  - > You are dedicating 4+ years of your life to contribute to academia. What drives you to do so?
  - > Do you still want to stay in academia after the PhD? Why (not)?

#### Work environment

First, I would like to talk a little bit more about your work environment.

- > Could you describe how you experienced your first few months at this faculty?
- > Could you describe the **social integration** policies at the faculty for PhD students?
- > How do you experience the academic **community** in your work environment?

#### Cultural differences

We are particularly interested in the views of international students. Therefore, I would like to relate your work environment with you being an international student.

- > If a friend of yours from a similar cultural background would start their PhD next year, what advice would you give regarding working in a Dutch work environment?
  
- > How did you experience the transition to the Dutch work environment as an international student?
- > What, if any, struggles did you experience as an international student?
  - > Were there particular things you liked about the new environment as an international student?
  
- > What would you imagine would be different in how you experience your PhD versus how a Dutch student experiences their PhD?
  
- > How has your experience regarding working in a culturally different academic system changed now that you have worked here longer?
  - > What aspects contributed to these developments?
  
- > Could you describe your relationship with other staff members/colleagues?
  - > Could you describe how cultural differences are present in your relationship with other staff members/colleagues?
  
- > If you imagine an ideal work environment. How does it look?
  - > In what way is it different from your current work environment?

### **Well-being**

There are several PhD students saying that their well-being is affected by their work environment. We are specifically interested in how international PhD students experience their well-being in the Dutch work environment. Some experience their life satisfaction and affectivity more as positive and some more as negative. Positive affectivity is typically characterized by enthusiastic, energetic, confident, active, and alert.

> How would you say your positive emotions and moods in your everyday life changed since you started the PhD?

> To what degree do you think this is related to the culturally different work environment?

*Negative* affectivity is typically characterized by sadness, lethargy, distress, and unpleasurable engagement.

> How would you say your negative emotions and moods in your everyday life changed since you started the PhD?

> To what degree do you think this is related to the culturally different work environment?

> How would you say your overall life satisfaction is influenced by working in a culturally different work environment?