

Fachbereich Erziehungswissenschaft und Psychologie der Freien Universität Berlin

# **Rejection Sensitivity**

## **A Cross-cultural Perspective**

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Ruifang Jiang

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# Rejection Sensitivity: A Cross-cultural Perspective

Erstgutachterin: Prof. Dr. Babette Renneberg

Zweitgutachterin: Prof. Dr. Christine Knaevelsrud

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## Introduction

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## Chapter 1

*It is a common saying, and in everybody's mouth, that life is but a sojourn. (Plato)*

*We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time. (T. S. Eliot)*

Sojourn means to stay in a new place as a temporary resident (Merriam-Webster Dictionary, 2016). Throughout history, each phase of world developments features distinct types of sojourners. In the modern era, “Internationalization in higher education is an inevitable result of the globalized and knowledge-based economy of the 21st century” (Altbach & Teichler, 2001, p5), the number of student sojourners involved in international education “has risen dramatically from 0.8 million in 1975 to 4.5 million in 2012” (Organization for Economic Co-operation and Development (OECD), 2014). Among this population, Chinese students represent the largest group (n=712,157, UNESCO, 2016). Numerous research has shown that this sojourning group crossing the border from east to west encounters significant culture differences and, as a result, has difficulties adapting to the respective host country.

Sojourn experience can be a process of separation and reintegration like Grinberg and Grinberg (1989, p. 23) described: “one ceases to belong to the world one left behind, and does not yet belong to the world in which one has nearly arrived”. While the pursuit of social acceptance and a sense of belonging are human beings’ inherent needs (Sullivan, 1953; Maslow, 1954; Ainsworth & Bowlby, 1991), cross-cultural transition could easily reduce student sojourners to a state of “relational deficit” especially at the beginning of their sojourn, which is also the period they need more support than usual (Sawir, et al., 2008). The process that sojourners establish links with the host culture

and achieve outcomes that are adaptive to both parties is conceptualized as cultural adaptation – an umbrella term for acculturation, adjustment, accommodation, and so forth. The development of interpersonal relationships and the related patterns of intra- and intercultural interactions have been reflected and stressed in the major theoretical perspectives on adaptation, for example, Bochner’s friendship network model, Berry’s acculturation theory within the stress and coping framework. Various research also suggests that psychological characteristics of individuals play important roles during cultural adaptation (Winkelman, 1994; Berry, 1995; Ward, Bochner, & Furnham, 2001; Zhang, Mandl, & Wang, 2010; Kim, Chen, Kools, & Weiss, 2016).

Cultural adaptation is a process full of interpersonal contacts, conflicts, and negotiations within cultures. This thesis considers rejection sensitivity and self-efficacy from interpersonal and intrapersonal aspects respectively, attempts to examine the role of these two psychological traits in cultural adaptation and to disentangle the relationship between rejection sensitivity, self-efficacy, cultural adaptation, and well-being of student sojourners. Since there has only been research with regard to the impact of race-based rejection sensitivity (i.e., expectation of discrimination based on membership in a minority group) on acculturation of immigrants (Mendoza, et al., 2002), but no research paying attention to the influence of a more “general” rejection sensitivity on interpersonal interactions through cultural transition, I am particularly interested in the question whether rejection sensitivity has specific associations with cultural adaptation and the well-being of sojourners. The group of Chinese student sojourners (referred as “CS” below) in Germany is specifically targeted due to a continuing increase in this population and lack of research. First, a Chinese version of the “Rejection Sensitivity Questionnaires-Adult” (RSQ-A) is developed and validated in study 1 to assure cross-cultural equivalence for further research. Second, I investigated the well-being situation of Chinese students living in Germany as well as the

interaction between the factors mentioned above (study 2).

The current thesis aims to capture the picture about adaptation and well-being of Chinese student sojourners in Germany and attempts to enrich the understanding of the significance of rejection sensitivity for adapting to a new culture. Presenting results bridge the gap of research, provides implications for further research, clinical practices, and counseling for student sojourners.

The first chapter of this thesis gives an overview of the research backdrop and relevant concepts, covering aspects of the theoretical issues about sojourners and adaptation, the Chinese students' mobility in the world, especially in Germany, the measurements of rejection sensitivity across cultures etc. In the following chapters, the two studies conducted within this thesis are presented. Finally, chapter 4 concludes with a review and evaluation of the two studies, and future prospects of research on the relation between rejection sensitivity and cultural adaptation are discussed.

## **Cultural Adaptation of Chinese Student Sojourners**

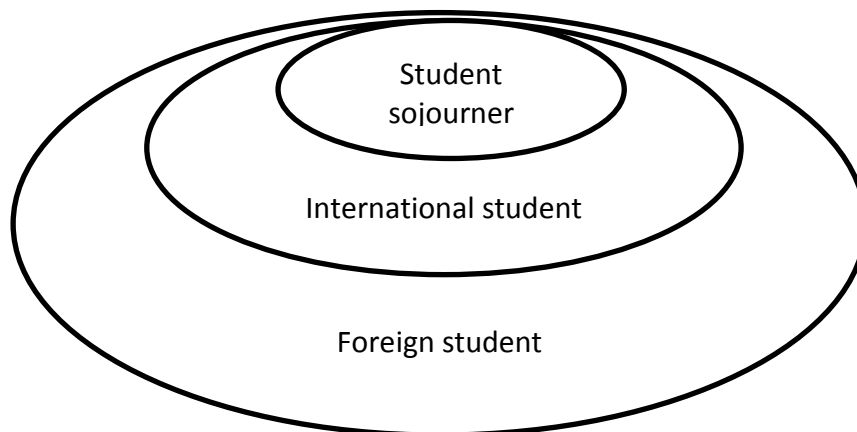
### **The definition of sojourner**

The term "sojourner" in cross-cultural research was first introduced into sociology by Paul Siu's study of Chinese laundrymen in Chicago (1952) and can be traced back to the concept "Der Fremde" (stranger) from German sociologist Georg Simmel's work on the social type of racial and cultural contacts (1908). At the beginning, Paul Siu described a sojourner as an individual who is "psychologically unwilling to organize himself as a permanent resident in the settlement country"; Uriely (1994) further expanded the sojourner concept to "permanent sojourner" with reference to the case of Israeli immigrants in Chicago. Later literature distinguished between sojourner, immigrant,

and refugee according to the length of time of their respective stay. A consensus was reached to the effect that sojourners are a group of people who perceive their sojourning abroad as a temporary stay lasting from 6 months to 5 years (Ward 2001). According to the different purposes of sojourn, three typical types of sojourner were classified as follows: tourists, expatriates, and students (Smith, Fischer, Vignoles, & Bond, 2013).

The importance of defining the group of student sojourners and differentiating it from “international student” and “foreign student” is based on psychological reasons. Student sojourners are “usually more committed than tourists to their new location, but less involved than immigrants and resettled refugees...‘returning home’ is anticipated and planned” (Ward, Bochner, & Furnham, 2001), while foreign students including immigrant students who have permanent residency in their settlements (UNESCO,2014) and international students comprise individuals who might have a permanent immigration plan in mind. The relationship between the three terms is described in Figure 1.1. Accordingly, in my investigation, participants were asked about their future plan, whether they would like to stay in Germany, which would verify their ‘sojourner’ identity and ensure the identification of student sojourners as the study target.

**Figure 1.1. The relationship between foreign student, international student and student sojourner**



## **The construct of cultural adaptation**

Living between two cultures can be a positive and optimistic time; it can, however, also represent a stressful period of change as people need to adjust to the sociocultural differences of the new place. Student sojourners are assumed to adapt to the new social and academic environment rapidly in order to achieve their academic goal in a limited period of time. The terms adjustment, adaptation, and acculturation typically refer to the process of adapting following cross-cultural transition (Church, 1982; Zhu, 2011). Originating from anthropology, the term acculturation concerns the acculturative changes on group level as well as on individual level, and with special emphasis on the changes in both parties (Berry, 1997). Meanwhile, the terms adaptation and adjustment are more focused on the individual level. Accordingly, the term acculturation is frequently employed in the research of immigrants and refugees while the subjects of adjustment and adaptation usually are sojourners. Thus, in this thesis, the term adaptation and adjustment are used interchangeably occasionally.

Changes during intercultural contacts could occur in multiple aspects, including behaviors (e.g., language usage), emotions (e.g., homesickness), and identities (e.g., cultural orientations). Individual differences of adaptation outcomes exhibit not only in changes of daily behavior but also in psychological well-being (Carlson, & Widaman, 1988; Sharkey, Sander, & Jimerson, 2010).

Ward and colleagues distinguished between psychological adaptation and sociocultural adaptation for the first time in their work about sojourners' adjustment (Searle & Ward, 1990). Psychological adaptation explains affective responses showing how comfortable or anxious an individual feels in a new culture (Ward, Bochner, & Furnham, 2001). Sociocultural adaptation refers to behavioral responses with regard to how efficiently an individual connects to the new culture, such as task managements on daily routines (Ward, Bochner, & Furnham, 2001). There is a consensus regarding the relationship

between sociocultural and psychological adaptation in as much as that these two aspects are interrelated but not always correlated and therefore should be measured separately (Ward, & Rana-Deuba, 1999; Motti-Stefanidi et al., 2008). In study 2, this construct is adopted to measure the adaptation of Chinese student sojourners in Germany.

### **Chinese Students in Germany**

According to UIS (UNESCO Institute for Statistics, 2014, see Figure 1.2), 53% of international students enrolled worldwide are from Asia; and China ranks first with the largest numbers of citizens enrolled abroad. The United States attracts 31% of all Chinese students studying abroad, while 28.7% choose Australia, Canada, and the United Kingdom. Although Germany gets only a relatively small proportion of the amount, the DAAD (German Academic Exchange Service) stated in its latest annual report that among all the international students in Germany, Chinese students are the largest group by a wide margin and the trend is increasing (n=30,259, Austauschdienst, D. A : Wissenschaft Weltoffen, 2016).

Corresponding with the profile, most studies on Chinese student sojourners' adaptation have been conducted in the United States, Australia, Canada, and England (on the basis of searching in Web of Science databases, retrieved on February, 2016) and the range of study regarding Chinese student sojourners living in non-English-speaking countries is relatively small. In Germany's case, despite Chinese students accounting for 9.42% of students studying in Germany (calculated based on the data of Wissenschaft Weltoffen, 2015), very few studies sought to understand the situation of their cross-cultural experience in Germany. I used "Chinese students Germany", "留学生 德国" and "Chinesisch Studenten Deutschland" as key words for searching in

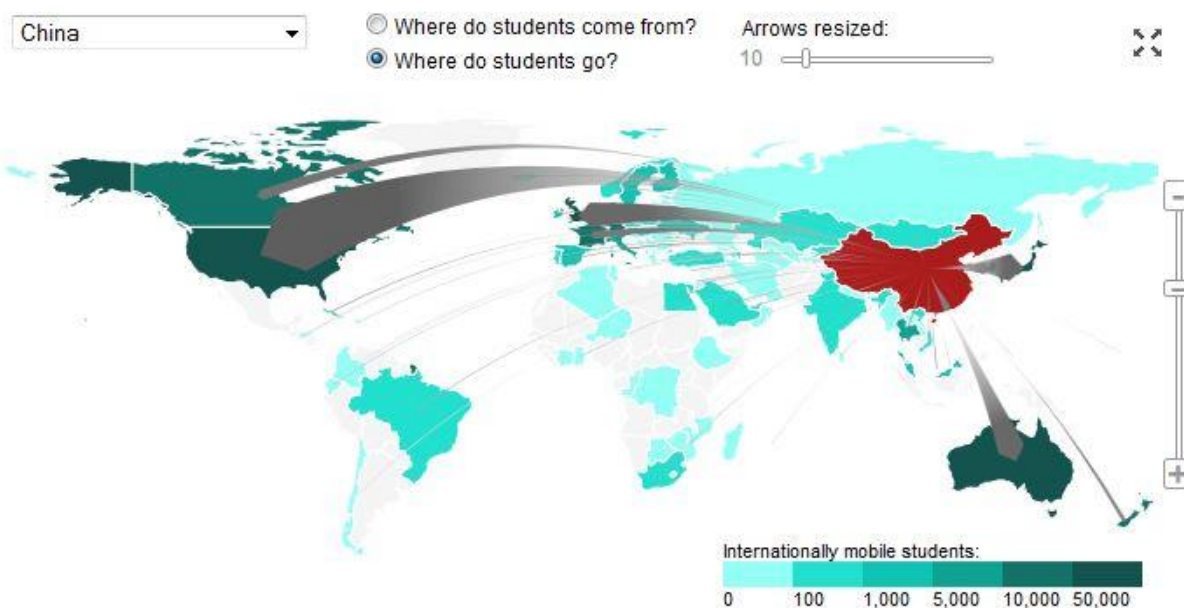
literature resources (Google scholar, Chinese National Knowledge Infrastructure Database) and could only find scant research (see Table 1, listed below are all of the 15 studies which focused on the adaptation aspects of Chinese students in Germany ).

**Figure 1.2. Profile of Chinese Students worldwide**

**GLOBAL FLOW OF TERTIARY-LEVEL STUDENTS**

Where do students go to study? Where do they come from? UIS data on the mobility of students shed light on the shifting demar higher education, particularly in the developing world.

To explore the data select a country from the menu, or click on the map.



China			Key Indicators	
Country of origin	Destination country			
No data	United States	225,474	Students abroad: Total number of mobile students abroad 712,157 (% of total mobile students) ... Outbound mobility ratio 2.1 Gross outbound enrolment ratio 0.6 Students hosted: Total number of mobile students hosted 96,409 (% of total mobile students) ... Inbound mobility rate 0.3	
	Japan	89,788		
	Australia	87,980		
	United Kingdom	81,776		
	Korea, Rep.	38,109		
	Canada	34,802		
	China, Hong Kong	25,801		
	France	25,234		
	Germany	19,441		
	New Zealand	12,219		
	China, Macao	10,367		
	Italy	9,788		
	Thailand	8,444		

Source: <http://www.uis.unesco.org/EDUCATION/Pages/international-student-flow-viz.aspx>

**Table 1: Overview of Research on Chinese Students' Adaptation in Germany**

Author	Year	Discipline	Sample	Methods	Topics	Key Findings
Yan	2007	Psychology	99 Mean age: 25.3	Cross-section questionnaire	Relationship of cross-cultural adjustment with stressor and strain	Stressors were associated negatively and significantly with all three kinds of adjustments, the adjustments could predict the level of strain from three aspects: cultural, psychological and physical strain.
Guan	2007	Health and Human Sciences	73 Information about Mean age was missing.	Cross-section questionnaire	Adaptation and integration	Studying in Germany is a critical and stressful life event for Chinese students. Language proficiency, study-related issues, social contact and financial problems were the most difficult parts for Chinese students' adaptation. Self-concept is relevant to the coping reaction and has been discussed in Chinese cultural context by the author.
Zhou	2009	Sociology	175 for questionnaire, and 17 for interview.	Cross-section questionnaire and interview.	the situation of Chinese students in Germany	Many young Chinese had high expectations for studying abroad but were completely unprepared for the difficulties they would confront. Studying abroad is challenging. Chinese students have numerous complaints about language, study difficulties, part-time job, which could lead to disappointing results such as drop-out or extension of the study. It is important to inform people better about the potential challenges.



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**Table 1. Continued: Overview of Research on Chinese Students' Adaptation in Germany**

Author	Year	Discipline	Sample	Methods	Topics	Key Findings
Song	2009	Psychology	German students in China:37; Chinese students in Germany: 47; German local students:42; Chinese local students:52	Cross-section questionnaire, interview	cultural experiences of German and Chinese exchange students	Situational context impacts more on Chinese participants' behavior than on German participants' behavior; developed a framework for international training program of German and Chinese exchange students.
He	2009	English Language and Literature	132 Mean age: 22.5	Cross-section questionnaire	Acculturation strategies and adaptation outcomes	Integration was the most preferred strategy, acculturation strategies varied accordingly in public and personal domains. Acculturation strategy is a predictor for life satisfaction, sense of loneliness and sociocultural difficulties.
Zhang, Mandl, 2010 & Wang		Psychology	139 Mean age: 25.3	Cross-section questionnaire	The effect of personality traits and acculturation variables on cross-cultural adjustment	Neuroticism and Openness both predicted sociocultural adjustment. Agreeableness and mainstream acculturation was related with general adjustment. Conscientiousness was associated with academic adjustment. Neuroticism and Conscientiousness were associated with all aspects of psychological adjustment, while Extraversion and Openness were only associated with positive components (self-esteem and life satisfaction).

**Table 1. Continued: Overview of Research on Chinese Students' Adaptation in Germany**

Author	Year	Discipline	Sample	Methods	Topics	Key Findings
Zhao	2010	German Language and Literature	60	Cross-section questionnaire	Culture shock	More than half of Chinese students reported problems regarding cultural shock, a quarter of them had mental health concerns even social withdrawal. Language barrier and lack of knowledge about German culture are two major factors affecting culture shock.
Yu & Wang	2011	Linguistics and applied linguistics	64 Mean age: 26.7	Cross-section questionnaire, interview.	Preferences in acculturation strategies	There was a gender difference in preferences of acculturation strategies. Males chose separation while females preferred integration.
Zhu	2012	Education	18 for interviews, 6 for case study 55 and 30 for questionnaire Mean age: 22.5	Interview, case study, longitudinal questionnaire	Academic adjustment	Background, situational and personal factors impacts on sojourners' academic adjustment. Good preparation in the pre-departure phase improved academic adjustment in the initial period.
Yang	2012	Linguistics and applied linguistics	76	Cross-section questionnaire	Intercultural communicative competence	Intercultural competence of most Chinese students in Germany is not sufficient, improvement is needed.
Polfuß	2012	Intercultural Communication	7	Case study	authentic situations of Chinese-German everyday life	Introduced a culture assimilator for the <i>intercultural learning</i> of Chinese students in Germany and assessed <i>the applicability of this training method</i> .

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**Table 1. Continued: Overview of Research on Chinese Students' Adaptation in Germany**

Author	Year	Discipline	Sample	Methods	Topics	Key Findings
Liu	2012	German as a Foreign Language	186 Mean age: 34	Cross-section questionnaire	academic success and metacognition	Metacognition strongly correlated with academic success of Chinese students in Germany.
Pan	2013	Foreign Studies	18	Interview	intercultural communicative competence	The stay in Germany can be much more seen and used as an opportunity to develop intercultural competence of Chinese students.
Mao	2015	German Language and Literature	154	Cross-section questionnaire	relationship of cross-cultural adjustment with stressor and strain	In general, Chinese students' cross-cultural adaptation is at a medium level but they have difficulties with the interpersonal dimension. Genders, length of time living in Germany and German-language fluency have significant impacts on cross-cultural adaptation.
Zhang	2015	Education and Psychology	88 for questionnaire; 16 for interview	Cross-section questionnaire, interviews	The situation of Chinese students in Germany	Nearly half of the participants reported high difficulties of sociocultural adaptation in their entire length of stay in Germany; compared to males, females had less difficulties of adaptation.

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Studies listed in Table 1 have depicted the difficulties Chinese students experienced in Germany; while most studies concluded that relocating to Germany is a stressful life event and managing interpersonal relationship is particularly challenging for Chinese students in Germany, few studies focused on the aspect of mental health, which might be ascribed to the fact that many researchers studying this topic specialize in language or education, rather than in psychology. The situation that existing research distributed across disciplines restricts the possibility of a deeper exploration from a psychology perspective; furthermore, most authors developed the questionnaires by themselves, which also made it difficult to compare studies. For instance, only 3 of the 15 studies investigated variables with regard to psychological conditions like depression and stress (Yan,2007; Zhang, 2009; Zhao, 2010), but since they used different assessments, it is hard to draw conclusions about the prevalence rates. This research gap left the mental health of Chinese student sojourners in Germany unattended. Last but not least, regardless of a huge demand to conduct longitudinal research in a cross-cultural area, only 1 study of the CS population (Zhu,2012) had a longitudinal design. In response to these issues, this research aims to bridge the gaps by conducting a comprehensive and repeated investigation on the well-being (quality of life and depressive symptoms) and psychological characteristics (general self-efficacy and rejection sensitivity) of CS group

in study 2.

## **Rejection Sensitivity**

Social rejection has been strongly associated with a reduction of well-being and disruptions in interpersonal functioning (Marin & Miller, 2013). Experiences of being rejected by others signal threats which can be experienced as pain and distress (Eisenberger, Lieberman, & Williams, 2003; Williams 2007). Individuals' interpretations of and coping with potential rejection vary from intra- and interpersonal factors (Rosenbach, 2014). While some people register social rejection quite seldom and tend to react to it calmly and indifferently, others are quick to detect personal rejections in even minor occurrences. The disposition that influences how one perceives rejection and responds to it is defined as rejection sensitivity (RS) (Downey & Feldman, 1996) and has been posited as a personality trait to expect, perceive, and overreact to rejection (emotionally and behaviorally). People with high RS tend to anxiously expect, readily perceive, and overreact to the signal of rejection (Downey & Feldman, 1996).

Drawing on theories of attachment, personality, social cognition, and social learning, the RS model posits that hypersensitivity to rejection develops out of "early, prolonged, or acute rejection experiences with significant others" (Pietrzak, Downey, & Ayduk, 2005,

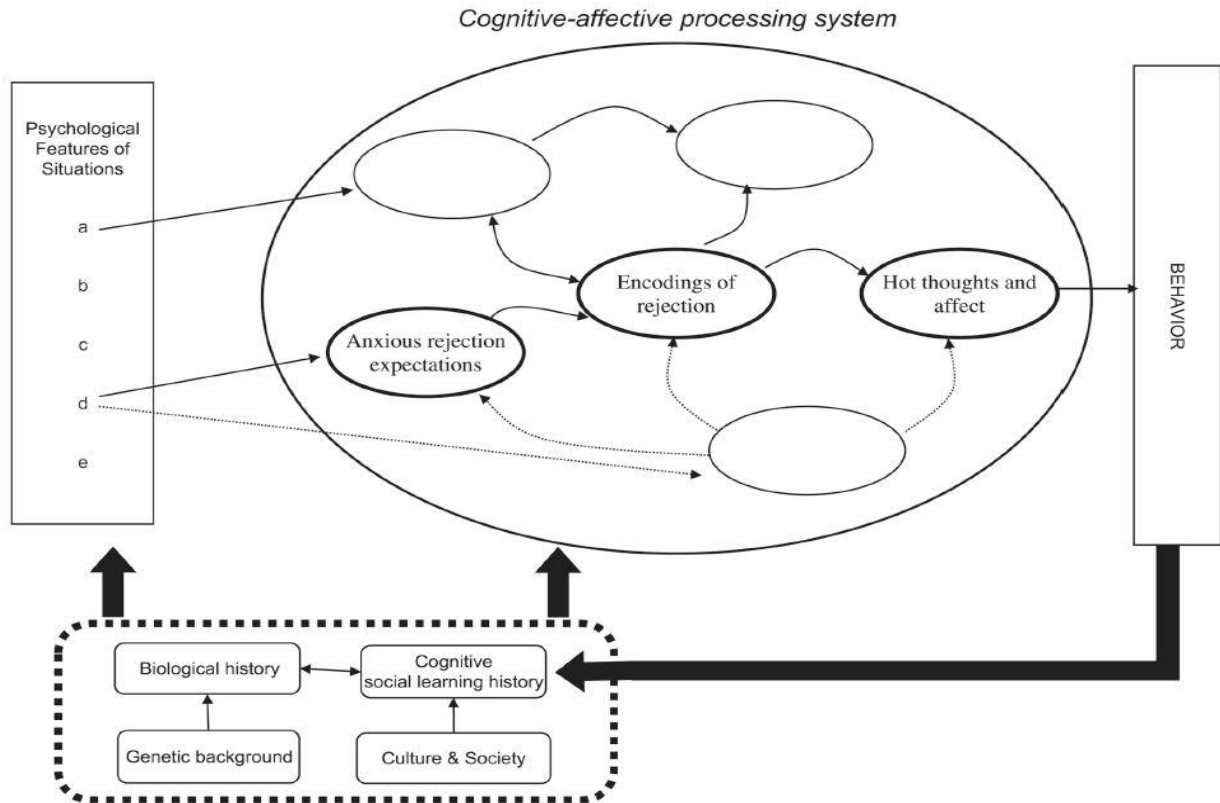
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p.63) and then influences the way people interact with relationships later in life.

Abundant research provides support for this view with investigations into the consequence of harsh parenting, problems with maintaining romantic relationship and so on (e.g., Downey, Khouri, and Feldman, 1997; Rosenbach, Renneberg, 2015).

Within the Cognitive-Affective Processing Systems (Mischel & Shoda, 1995), Downey et al. (Pietrzak, Downey, & Ayduk, 2005; Ayduk & Gyurak, 2008) formulated RS as a dynamic processing of cognitions and affects in specific psychological features of a situation. Contextualizing with the influence of biology, genes, culture, and social learning history, the situation entailing possibility of rejection prompts high RS individuals' anxious expectations of rejection as entry points, sequentially activates encodings of rejection, generates affective (e.g., hostility) and behavioral reactions (e.g., self-silencing) which can result in eliciting actual rejection by others in the form of a self-fulfilling prophecy (Downey, Freitas, Michaelis, & Khouris 1998). A feedback loop then reflects the experiences of the self-fulfilling prophecy into the individuals' cognitive and social learning history, forming a vicious cycle impacting the subsequent relationship (see Figure 1.3).

**Figure 1.3: A schematic illustration of cognitive-affective processing dynamics that characterize people high in rejection sensitivity.**



Source. (Ayduk, Ö. & Gyurak, A., 2008).

It has become consensus that rejection sensitivity not only impacts the development and maintenance of important relationships but also affects human beings' psychological well-being (London, Downey, Bonica, & Paltin, 2007; Rüsçh et al., 2009; Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010). Rosenbach & Renneberg (2011) investigated 21 studies of rejection sensitivity in clinical and non-clinical settings, the results suggest an overall role of high rejection sensitivity for the etiology as well as the maintenance of mental problems. Positive associations have been found between hypersensitivity to

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rejection and borderline symptoms, depressive symptoms, social anxiety, and aggressive behavior.

In the field of cross-cultural psychology, there has been a growing body of studies focusing on the consequences of race-based rejection sensitivity (Link, Phelan, & Hatzenbuehler, 2014; Richeson & Sommers, 2016), and emerging evidence has shown the detrimental effects of race-based RS on ethnic minority individuals' health outcomes including HIV risk, depressive symptom, obesity and so on. (Jr, McIntyre & Abbey, 2015; Han, et al., 2015; Brittian et al., 2015).

However, most research of race-based RS was conducted in the U.S. because originally this concept and related assessments were proposed for African immigrants in America.

When it comes to sojourners, especially in a country like Germany, it could be a totally different case.

In a general sense, relocating to another culture is metaphorically similar to transplantation in medicine, both of which can result in potential rejections. Leaving most of their old social ties from their home country behind, student sojourners throw themselves into a new and to them often strange social and academic milieu, where they need to interact with an increasing number of strangers. This creates many situations in which they are at risk of rejection or exclusion, especially when there are notable



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language barriers and cultural differences. Among the many difficulties they encounter, loneliness and the inability to be socially accepted were acknowledged as endemic problems and have remained the same almost over a century (Wheeler, King, & Davidson, 1925; Church, 1982, (p.54); Zhu, 2012).

Although rejection and related pains could come from various sources for sojourners living abroad, for instance, from a refusal by a conational friend to your invitation of traveling together, the ending of a long-distance relationship with a girlfriend in the home country, or a supervisor's disapproval of a project proposal, to my knowledge, so far there has been no research involving the impact of sojourners' rejection sensitivity on cultural adaptation and psychological well-being in a broader context, i.e., not only limited to ethnicity.

In light of the present situation, this study takes rejection sensitivity as an interpersonal vulnerability for sojourners' adaptation and is particularly interested in uncovering how a personality disposition born of past experiences in the home country can impact the current sojourning life in an unfamiliar culture.

For the operationalization of RS, the Rejection Sensitivity Questionnaire was developed in the United States (Downey, Feldman 1996), a 16-item Chinese version was adapted from the America version, but only suitable for college students (Zhao, Li & Zhang, 2012).

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However, many Chinese students in Germany are at postgraduate level. A general adult version might be more appropriate in this situation to detect rejection sensitivity of the population. Therefore, to guarantee RS test scores can be interpreted in the same way across Chinese and German cultures, i.e., to verify cross-cultural equivalence, a German version RSQ (Stäbler et al., 2011, Schulze 2011) was chosen to be validated for the study of Chinese student sojourners in Germany.

### **Self-efficacy**

Self-efficacy is a key concept described by Albert Bandura's social-cognitive theory as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986).

In this thesis, the expectation that self-efficacy would be relevant to cultural adaptation and well-being of sojourners was based on previous theoretical and empirical work. Bandura (1997) suggested that self-efficacy might be a mediator between stress coping and well-being. Self-efficacy makes differences in terms of feeling, thinking, and action. Highly self-efficacious individuals incline to view problems as challenges and to recover more quickly from setbacks, rather than focusing on negative aspects of a situation or believing that challenging situations are beyond their capabilities (Schwarzer & Fuchs,

1996). Consequently, stronger feelings of self-efficacy are expected to be related to lower stress and depression, more active coping, and greater contentment (Torres & Solberg, 2001; Zajacova, 2005). A myriad of research has supported the view that self-efficacy is a resilient source in the stress-coping process (Smith & Carlson, 1997; Schwarzer, 2014). In the particular case of cross-cultural experiences, evidence has linked high self-efficacy with less acculturative stress and better adjustment among populations of American expatriates in Europe and Asian international students in the U.S. (Harrison, Chadwick, and Scales, 1996; Lee & Ciftci, 2014). Because of the special role self-efficacy plays in the domains, it was included as an important factor interacting with well-being in both study 1 and study 2.

## **Depression**

Depression is one of the most frequent and serious mental illnesses worldwide (Marcus et al., 2012). The negative effects of depression are not limited to interrupting people's intrapersonal and interpersonal functioning in daily life but also increase the risk for suicide (Van Praag & Plutchik, 1984; Schmitt & Falkai, P, 2014). Although it is well-documented that the challenges associated with cultural transitions make student sojourners vulnerable to stress and that consequently they suffer a lot from depressive

## Introduction

symptoms (Oei & Notowidjojo, 1990; Khawaja & Dempsey, 2007; Smith & Khawaja, 2011; Sirin, Ryce, Gupta, & Rogers-Sirin, 2013), there has been little empirical research specifically targeting this common and serious mental health problem affecting Chinese student sojourners in Germany.

Focusing on this gap, depressive symptoms among Chinese students in Germany is investigated as an outcome variable regarding the pathological aspect in study 2. Furthermore, the interplay between depressive symptoms, cultural adaptation, and rejection sensitivity was explored.

## **Quality of Life**

Quality of life (QoL) is a significant concept in social and psychological research and refers to individuals' subjective evaluation of their overall well-being. The World Health Organization (WHO) defined it as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (WHO-QoL- Introduction, 1996). This definition reflects the point that QoL is not only influenced by what is going on "here", but also colored by personal history and cultural experiences. In this sense, it is reasonable to assume that cross-cultural transition experience would play a special role in sojourners'

view of QoL; meanwhile, perceived QoL could mirror the relationship between sojourners and the cultures they live in. These assumptions are echoed in several empirical studies regarding sojourners' QoL. Kuwahara (2010) investigated the quality of life of 155 Japanese student sojourners in the U.S. and compared it to the general population in Japan and Japanese college students in Japan. Results showed sojourners reported higher QoL and sense of fit-in with Americans, also Western/U.S. values were positively related to higher quality of life. Henning and colleagues (2012) found international students in New Zealand had lower score on social relationship and environmental domain of QoL compared to their domestic peers because they had different educational and social experiences. However, due to the fact that QoL study in the sojourners' population is quite rare, more studies are needed to obtain a better understanding for this topic. Thus QoL was added to study 2 as a variable to assess the outcome of nonpathological aspect of Chinese student sojourners in Germany.

## **Research objectives**

Based on both the empirical and theoretical work mentioned above, there is substantial evidence that rejection sensitivity has impacts on individuals' well-being in both clinical and nonclinical settings. Particularly against the "face culture" background of China and

## Introduction

under the condition of cross-cultural transitions, *rejection sensitivity* is likely to become an even more promising research topic. Hence in study 1 of this thesis, the German version RSQ was adapted into a Chinese version to obtain the cross-cultural equivalence, examine the scale's psychometric properties and explore potential cultural differences (study 1).

According to the previous review of studies regarding Chinese student sojourners in Germany and in contrast to the thriving research in English-speaking countries, the well-being, particularly the prevalence of depressive symptoms and quality of life, of Chinese student sojourners in Germany remains unexplored. Furthermore, based on previous studies, general self-efficacy and cultural adaptation exert influence on sojourners' well-being, while rejection sensitivity is firmly associated with individuals' interpersonal relationships. However, there is a lack of research taking these psychological factors into account even when many studies emphasized the impact of interpersonal stressors on the well-being of sojourners. Therefore, this thesis focuses on the well-being of this specific population by investigating both pathological and non-pathological aspects, i.e. the level of depression symptoms and quality of life, and furthermore attempts to provide insights into the relationships among cultural adaptation, rejection sensitivity, general self-efficacy and well-being (study 2).

## **Study 1: Assessing Rejection Sensitivity across Cultures**

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### **Chapter 2**

## **Abstract**

The Rejection Sensitivity Questionnaire (RSQ, Downey, & Feldman, 1996) is a measure widely used to assess rejection sensitivity. The study aimed to adapt and validate a Chinese version of the RSQ and extend previous research with a cross-cultural scope. The Chinese version of the RSQ demonstrated good psychometric properties in both clinical and nonclinical samples. Cultural differences in rejection sensitivity were examined between Chinese and German groups. The results of this study suggest that the RSQ is a useful research tool. Implications for future cross-cultural research are discussed.



## Introduction

As social and cultural animals, human beings sustain a strong need to be accepted and to belong (Baumeister & Leary, 1995). Consequently, the significant role of processing rejection, i.e., expect, interpret and react to rejection in the context of interpersonal relationships, is stressed by abundant research.

Rejection sensitivity (RS) is described as a personality trait of anxious expectation, ready perception, and overreaction to rejection cues (Feldman, Downey, 1994). Mounting evidence has linked RS to interpersonal difficulties and psychological dysfunction (e.g., Berenson et al., 2016; Woerner, Kopetz, Lechner, & Lejuez., 2016). Downey and Feldman (1996) developed the Rejection Sensitivity Questionnaire (RSQ) which contains specific social situations potentially relevant to rejection, in order to detect individual's degree of rejection sensitivity. The original RSQ questionnaire is available in versions for both children and college students and was further modified for non-student populations and for different languages. In spite of the fact that the RS measurements have been used in multitudinous research in Western countries, e.g., an adapted German version of the questionnaire for adults was validated to explore the relation between RS and borderline personality disorder (Staebler, Helbing, Rosenbach, & Renneberg, 2011), its validity in Asian culture is scarce and the related studies on culture differences are still vague.

More specifically, as representatives of a "face culture" which regards humility and harmony highly (Leung, & Cohen, 2011; Smith et al., 2015), Chinese place a particular emphasis on the importance of other people and "relationship" (in Chinese: "关系"), respectively, to be accepted means the others "give face" to you or you "gain face", while

## Study 1

the experience of being rejected can be interpreted as “losing face”, which could stir up sentimental feelings easily under the cultural background influence. Surprisingly, little attention has been given to the topic of rejection, no Chinese articles on the clinical implications of rejection sensitivity were found, and the validation of its application to Chinese populations has been very scarce. Some researchers revised the 18-item RSQ American version into a 16-item Chinese version, but the version is only suitable for college students (Zhao, Li & Zhang, 2012). A general version of the assessment might be adequate to detect rejection sensitivity within this population.

Given that the cultural distinctions and the Chinese assessment instruments for rejection sensitivity are still in its infancy, more explorations on assessment instruments and supplementary in-depth study in this field are desirable. The present study aims (a) to examine the psychometric properties of the Chinese version of RSQ and (b) to explore the potential cultural differences of rejection sensitivity.

## Method

The adaptation of the Chinese RSQ was based on the German and English versions of the instrument. The procedure followed the “group consensus model” involving several bilingual translators, back translations and discussions. The goal was not to achieve a literal translation of each item, but rather a dynamic equivalence of the concept of rejection sensitivity to the Chinese culture. First, the author and a Master students majored in clinical psychology translated the German 9-item version of RSQ into Chinese (the master student is German, and the author is a Chinese Ph.D. student living in Germany); Second, a Chinese Ph.D. student majored in German language (who was unaware of the study objectives) completed the back translation from Chinese to German, then the back translation was reviewed by two German psychologists and their feedback was incorporated.

Data were then collected by investigations in different phases and samples. In the first phase, a pilot study was carried out online with a small group of Chinese adults (n=31) to obtain initial evidence of reliability; in the second phase, a large group of college students in south China was recruited to test RSQ’s factor structure (n=429) and test-retest reliability (n=75). Third, clinical data (n=82) was collected to examine the discriminant validity of Chinese RSQ.

Multiple measures were chosen to combine with the Chinese RSQ in the surveys in order to test different aspects of RSQ’s psychometric properties accordingly. For instance, specific instruments for depression were applied in the clinical sample while the Brief Symptom Inventory-18 was used as an overall assessment of mental health in the students sample. A general length of these surveys was 10-25 minutes.

To encourage participation, all the participants got either feedback on their scores or a

## Study 1

10-RMB gift. Most participants filled out a set of inventory by clicking on a link to online survey websites<sup>1 2</sup>, but the survey was also carried out with paper-and-pencil when the internet was not available. After reading a complete description of the study, participants in the online survey indicated their consent by selecting a button that said they agreed to join the study; written consent was obtained for surveys with paper-and-pencil.

All studies were run with the approval of Department of Education and Psychology of Freie Universität Berlin Review Board.

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1.<https://www.google.com/forms/about/>

2.<http://www.sojump.com/html/aboutus.aspx>

## **Participants**

The sample of the first phase was composed of 31 adults recruited online (77.4% female; mean age = 28.61, SD = 1.69) in February 2014. In the second phase of this study, 429 undiagnosed undergraduate college students (52.45% females; mean age = 21.08, SD = 1.31) joined the study as part of a class assignment at Fujian Agriculture and Forestry University in February 2014 to March 2014. Additionally, 154 students in Fuzhou University were asked to complete RSQ twice with an interval of 2 weeks in October 2014. Seventy-five students (88% females; mean age = 20.09, SD = 1.00) completed the assessment. Third, 82 outpatients (56.1% females; mean age = 31.62, SD = 11.78) were recruited in the psychiatric clinic of General Hospital of Fire Energy Group of Fujian from March 2015 to December 2015.

## **Materials**

Based on the empirical evidence of prior research, we expected rejection sensitivity to be positively associated with symptoms of depression, anxiety, somatization, interpersonal sensitivity and hostility. In particular, we also expected a strong correlation between RS and features of borderline personality disorder. To examine the RSQ's concurrent validity, relevant measures were used and are described below.

**Demographic information.** As part of the survey, participants were asked information about their gender, age, and relationship status.

### **Brief Symptom Inventory-18**

The Brief Symptom Inventory-18 (BSI; Derogatis, 2000) is an abbreviated form of the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1994) and was developed as a screening scale for common psychiatric disorders, depression, and anxiety and somatization (Derogatis, 2000). Findings in a study with 303 Chinese drug users concluded that the BSI-18 as well as its three subscales (SOM, DEP, and ANX) can be used in Chinese populations (Wang, Jichuan, et al., 2013). In the present sample, the scale's internal consistency was measured by Cronbach's  $\alpha$  and ranged from .92 to .95 (for standardized items).

### **McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD)**

MSI-BPD developed by Zanarini and colleagues (2003) is a 10-item self-report measure that screens for the presence of borderline personality disorder (BPD). The MSI-BPD is based on a subset of questions derived from the borderline module of the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV), which is a reliable semi-structured interviews for diagnosing Axis II disorders (Zanarini, Frankenburg, Sickel, & Yong, 1996). The Chinese version of MSI-BPD was validated in 1206 college students (Wang, Leung, Zhong., 2008: 749 males and 457 females, mean age: 20.02±1.77) and 680

psychiatric patients (Chen, Zhong, Liu, Lu., 2011: male 343, female 336, gender information missing 1, mean age: 35±13) and showed good internal consistency and concurrent validity, a cutoff of 7 or more positive answers to the 10-item MSI-BPD was judged to be the best cutoff. By using logistic regression analyses, it exhibited both good sensitivity (.81; percentage of correctly identified cases) and specificity (.85; percentage of correctly identified non-cases) for the diagnosis of DSM-IV BPD. In the present sample, the scale's internal consistency was measured by Cronbach's  $\alpha$  and ranged from .75 to .81 (for standardized items).

### **Questionnaire of Thoughts and Feelings (QTF)**

Based on both cognitive concepts of personality disorders and the bio-social model of BPD, Renneberg and her colleagues developed the questionnaire of thoughts and feelings (QTF) to measure the degree and content of borderline-specific cognition and feelings. The full version of the QTF includes 37 items, to make the instrument economic, a brief version, containing 14 items was developed too (Renneberg & Seehausen, 2010). In different studies, item characteristics, reliability, convergent as well as discriminant validity were assessed; results indicate good internal consistency and test-retest reliability, high convergent validity, and very good discriminant validity for the QTF-37 as well as for the brief version QTF-14 (Renneberg, Schmidt-Rathjens, Hippin, Backenstrass, & Fydrich, 2005, Renneberg & Seehausen, 2010). In the present sample, the 14-items Chinese version of QTF was used, the scale's internal consistency was measured by Cronbach's  $\alpha$  and ranged from .85 to .91 (for standardized items).

### **Generalized Self-Efficacy Scale (GSES)**

General self-efficacy (GSE) refers to self-beliefs in coping across a variety of demanding or novel situations (Jerusalem&Schwarzer,1981). The Generalized Self-Efficacy Scale (GSES) is a 10-item scale measuring individuals' beliefs to cope with a wide range of difficulties in life. The scale was originally developed by Matthias Jerusalem and Ralf

Schwarzer (1992) in German and was then validated by Zhang (1995) into Chinese. The Chinese GSES had satisfactory validity and reliability. In the present sample, the scale's internal consistency was measured by Cronbach's  $\alpha$  and ranged from .90 to .93 (for standardized items).

**Hostility subscale of Symptom Check List-90-Revised(SCL-90-R)**

The 6-item hostility subscale of SCL-90-R detected the symptoms of the hostility reflecting the negative affect state of anger (Derogatis, 1994). In the present sample, the scale's Cronbach's  $\alpha$  is .85 (for standardized items).

**Interpersonal sensitivity subscale of Symptom Check List-90-Revised (SCL-90-R)**

Interpersonal sensitivity is a construct referring to "undue and excessive awareness of and sensitivity to the behavior and feelings of others" (Boyce & Parker,1989), which is considered to be close to the construct of "rejection sensitivity"; thus we enclosed the nine items of the interpersonal sensitivity subscale of Symptom Check List-90-Revised (SCL-90-R) in the inventory. In the present sample, the scale's internal consistency was measured by Cronbach's  $\alpha$  and ranged from .84 to .87 (for standardized items).

**Center for Epidemiological Studies-Depression Scale (CES-D)** The 20-item Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977) was employed to assess depressive symptoms in this survey. The CES-D has demonstrated good reliability and validity (Shafer, 2006) and is widely used in both clinical and nonclinical settings of the Chinese population. In the present sample, the scale's internal consistency was  $\alpha = .79$ .

**Rejection Sensitivity Questionnaire.** The Chinese version of the Rejection Sensitivity Questionnaire (RSQ) is translated from the German 9-item RSQ (Schulze, Gutz, & Reneberg, 2012) which was an adaption from the American version of Downey and Feldman (1996). The RSQ provides 9 hypothetical situations which afford the possibility of rejection and asks respondents their expectations and anxiety about being rejected



towards these situations (e.g., “You ask a friend to go on vacation with you”). In each situation, respondents indicate the level of anxiety and perceived likelihood of acceptance on a 6-point Likert’s scale. The scores of rejection sensitivity for each situation are calculated as follows: the score for degree of anxiety or concern (1) is multiplied by (2) the reverse score for the expectancy of acceptance (expectancy of rejection = 7-expectancy of acceptance). The formula is: rejection sensitivity = (anxiety of rejection) × (expectancy of rejection). The overall rejection sensitivity score is the mean of the resulting scores. The German RSQ is proved internally reliable, internal consistency (*Cronbach’s*  $\alpha = 0.80$ ) and test-retest reliability ( $r_{tt} = 0.90$  after 2 weeks) are good (Staebler et al., 2011; Schulze, Gutz, & Reneberg, 2012).

## **Analysis**

Exploratory factor analysis and confirmatory factor analysis were used to test the factorial validity of the Chinese RSQ. The internal consistency reliability of the scale was assessed by Cronbach's alpha, and concurrent validity was evaluated by the Chinese RSQ's correlation with depression, borderline personality disorder, and anxiety. Divergent validity was assessed by comparison between clinical and nonclinical samples. Pearson's correlation, t-tests, analysis of variances and analysis of covariance were applied accordingly. All analyses were conducted with *SPSS statistics 23* and *Mplus 5*.

## Results

### Descriptive Results

Means and standard deviations of the three samples (pilot study, college students, and outpatients) are presented in Table 2.1.

**Table 2.1: Descriptive Statistics**

Sample <sup>c</sup> Measure	Pilot Study Sample <sup>a</sup>		College Students Sample <sup>b</sup>		Outpatients	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. RSQ	9.23	3.91	10.01	3.52	11.68	4.73
2. RSQ anxiety subscale	3.09	.90	3.30	.90	3.21	1.04
3. RSQ expectation subscale	2.80	.79	2.96	.77	3.67	.94
4. General self-efficacy	-	-	2.75 <sup>#</sup>	.64 <sup>#</sup>	2.07	.64
5. BSI-depression	1.02	.95	.82	.69	-	-
6. BSI-anxiety	.89	.96	.77	.73	-	-
7. BSI-somatization	.77	.85	.58	.62	-	-
8. SCL-hostility	.93	.68	.53	.62	-	-
9. SCL-interpersonal sensitivity	.82	.58	.89	.68	-	-
10. MSI-BPD	2.55	2.66	1.93	2.18	4.60	2.93
11. CESD	-	-	-	-	43.02	8.66

*Note.* *a*: *n*=31; *b*: *n*=429 except for GSE; *#*: *n*=235, in compliance with the scoring rule of the other Chinese studies, the overall self-efficacy score was calculated by taking the mean of the 10 items; *c*: *n*=82.

### Factor Structure

The college students sample was split into two parts to examine the factor structure of the Chinese version of the RSQ. First, exploratory factor analysis (EFA) was performed on half of the college students sample which was selected randomly. Data has yielded two factors with eigenvalues greater than one, but only one factor was retained by the scree test. The factor explained 43.54% variance, all of the 9 items loaded at greater than 0.4. Although Bartlett's test is significant, the value of Kaiser-Meyer-Olkin (KMO) was only .27 (should be > .5), indicating a problem with factorability, probably collinearity to an extreme degree. Confirmatory factor analysis (CFA) was then conducted to test one factor solution with the other half of the sample. The goodness of fit of the model is

evaluated with the Tucker-Lewis Index (TLI), the comparative fit index (CFI), the Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Square Residual (SRMR). Values of CFI>0.9, TLI>0.9, RMSEA<0.08 and SRMR<0.05 are regarded as indications of a good fit with the data (Hu, & Bentler, 1999). The data resulted in a bad fit (CFI=0.824, TLI=0.765, RMSEA=0.089). Particularly, item 2 (the content of this item is: “You approach a close friend to talk after doing or saying something that seriously upset him/her”) got a standardized factor loading greater than 1 which violates the assumption of CFA. Also, the correlations between item 2 and the other 5 items are greater than 0.6, indicative of a high degree of multicollinearity. Thus, item 2 was removed from the Chinese version of the RSQ and further analyses were conducted on the basis of the remaining 8 items.

After the deletion of item 2, EFA and CFA were repeated on the same data sets, the results supported one-factor solution for the Chinese RSQ with good fit indices of the CFA model (CFI=0.931, TLI=0.901, RMSEA=0.065, SRMR=0.049). EFA showed the factor explained 37.84% of total variance, with all of the 8 items loaded at greater than 0.5 (see details in Table 2.2) and the value of KMO was 0.76.

**Table 2.2: Factor loadings for Rejection Sensitivity Questionnaire (RSQ) items**

Items	Factor loading
Your partner has plans to go out with friends tonight, but you really want to spend the evening with him/her, and you tell him/her so.	.65
At a meeting, you disagree with the team about a problem. You explain your opinion and expect statements of other participants.	.68
You ask a friend to go on vacation with you.	.63
You call your partner after a bitter argument the day before and tell him/her you want to see him/her.	.63
You ask a related person to accompany you to a very important occasion (e.g., consultation, hearing).	.62
You go to a party and notice someone on the other side of the room and then you ask him/her to dance.	.62
You ask your partner, you have not been dating very long if he/she wants to meet your parents.	.58
You are not able to complete a job in due time and ask your head about an extension of time.	.51

## **Reliability**

### **Internal Consistency**

The Chinese 8-item RSQ had good internal consistency across all the three samples, Cronbach's  $\alpha$  ranged from .75 to .82 (for standardized items) and decreased if any of the items were deleted, item-total correlations ranged from .42 to .66. Composite reliability coefficients for the Chinese RSQ is .77, beyond the desired threshold of .70 (Hair, 2009).

### **Test-retest Reliability**

Seventy-five students completed the RSQ scale twice, with an interval of 2 weeks. Pearson correlation for the RSQ score in this sample was  $r_{tt} = .74$ .

### **Concurrent Validity**

To assess the discriminant validity of the Chinese RSQ, a one-way ANCOVA was performed to determine a statistically significant difference between nonclinical ( $n=456$ , mean age = 21.59 years,  $SD = 2.32$ ; 54.1% female; smaller sample size due to 4 missing data on age) and clinical samples ( $n=81$ , mean age = 31.62 years,  $SD = 11.80$ ; 56.1% female; smaller sample size due to 1 missing data on age) on the level of rejection sensitivity, taking age as a control variable due to the age distribution difference between the two samples. The effect of age was significantly related to the level of RS,  $F(1, 534) = 10.15$ ,  $p < .01$ . There is a significant effect of group difference on the level of rejection sensitivity after controlling for age,  $F(2, 534) = 24.93$ ,  $p < .001$ .

In terms of criterion-related validity, Table 2.3 and Table 2.4 show the correlations between these measures in the college students sample as well as the clinical sample.

## Study 1

**Table 2.3: Means, Standard Deviations, and Correlations for the Measures Administered to the College Students Sample (N = 429).**

Variable	1	2	3	4	5	6	7	8
1. RSQ	—							
2. BSI-depression	.36**	—						
3. BSI-anxiety	.34**	.73**	—					
4. BSI-somatization	.23**	.60**	.66**	—				
5. MSI-BPD	.26**	.58**	.55**	.47**	—			
6. QTF	.28**	.60**	.57*	.48**	.57**	—		
7. GSES <sup>a</sup>	-.32**	-.23**	-.18**	-.15*	-.09	-.13*	—	
8. SCL-hostility	.23**	.51**	.61**	.51**	.51**	.61**	-.11	—
9. SCL-interpersonal sensitivity	.37**	.72**	.71**	.60**	.58**	.63**	-.19**	.65**

Note. RSQ=Rejection Sensitivity Questionnaire; BSI=Brief Symptom Inventory; MSI-BPD = McLean Screening Instrument for Borderline Personality Disorder; GSES = Generalized Self-Efficacy Scale; SCL=Symptom Check List-90-Revised; a: n=235; \* $p < .05$ . \*\* $p < .01$ .

**Table 2.4: Means, Standard Deviations, and Correlations for the Measures Administered to the Outpatient Sample (N = 82).**

Variable	Mean (SD)	1	2	3	4
1. RSQ	11.68(4.73)	—			
2. CESD	43.02(8.66)	.36**	—		
3. MSI-BPD	4.60(2.93)	.49**	.63**	—	
4. GSES	2.07(.64)	-.45**	-.23**	-.30**	—

Note. RSQ=Rejection Sensitivity Questionnaire; CESD = Center for Epidemiological Studies Depression; MSI-BPD = McLean Screening Instrument for Borderline Personality Disorder; GSES = Generalized Self-Efficacy Scale, in compliance with the scoring rule of the other Chinese studies, the overall self-efficacy score was calculated by taking the mean of the 10 items; \* $p < .05$ . \*\* $p < .01$ .

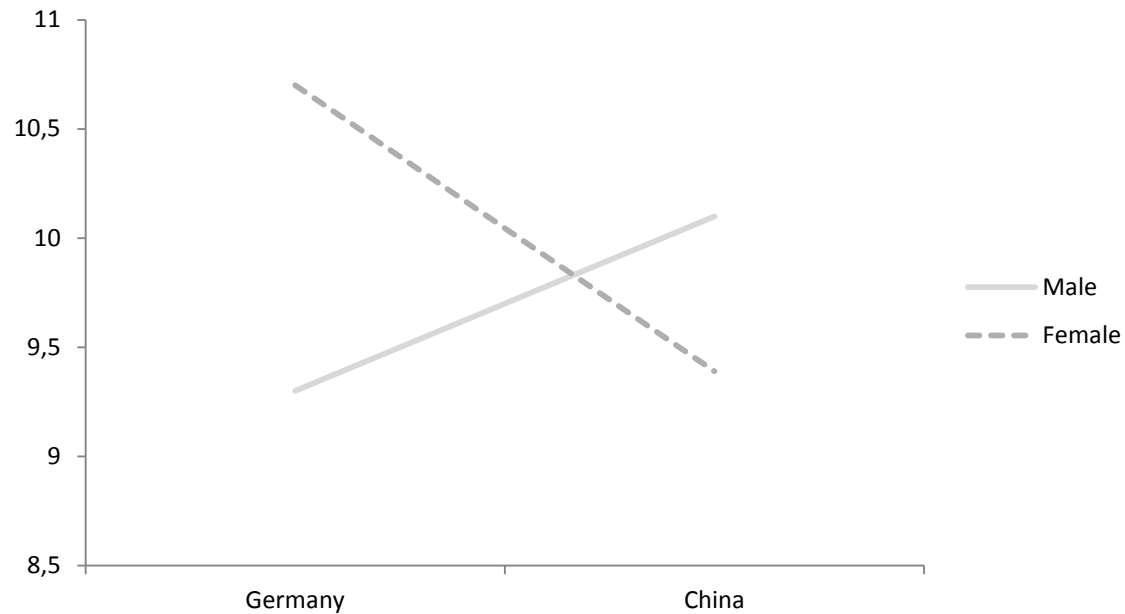
## **Nation and Gender Differences**

Matched by age and gender, a subset data was extracted from three studies conducted in German nonclinical population (data processed and offered by Julian Schulze, 2014) which was composed of 223 German young adults (mean age = 22.62 years, SD = 3.06; 69.5% female) to compare with the nonclinical sample of 223 Chinese young adults (mean age = 22.38 years, SD = 2.92; 65.9% female) on their rejection sensitivity level. The RS mean score of the German group was marginally significantly higher than their Chinese counterparts' score ( $10.27 \pm 4.22$  vs  $9.63 \pm 3.55$ ;  $p=0.08$ ).

A 2×2 factorial ANOVA (two levels of the nation and two levels of gender) was conducted to detect the effects in terms of nation and gender. Neither the nation factor nor the gender factor showed a significant main effect, however, the interaction of nation and gender was significant,  $F(1,446) = 7.17$ ,  $p = .008$ . Sequentially, simple effects were examined. As Figure 2.1 shows, there is no significant gender difference within the Chinese group regarding RS mean score, while German females had significantly higher RSQ mean scores than German males ( $p=.014$ ) and Chinese females ( $p=.004$ ).

## Study 1

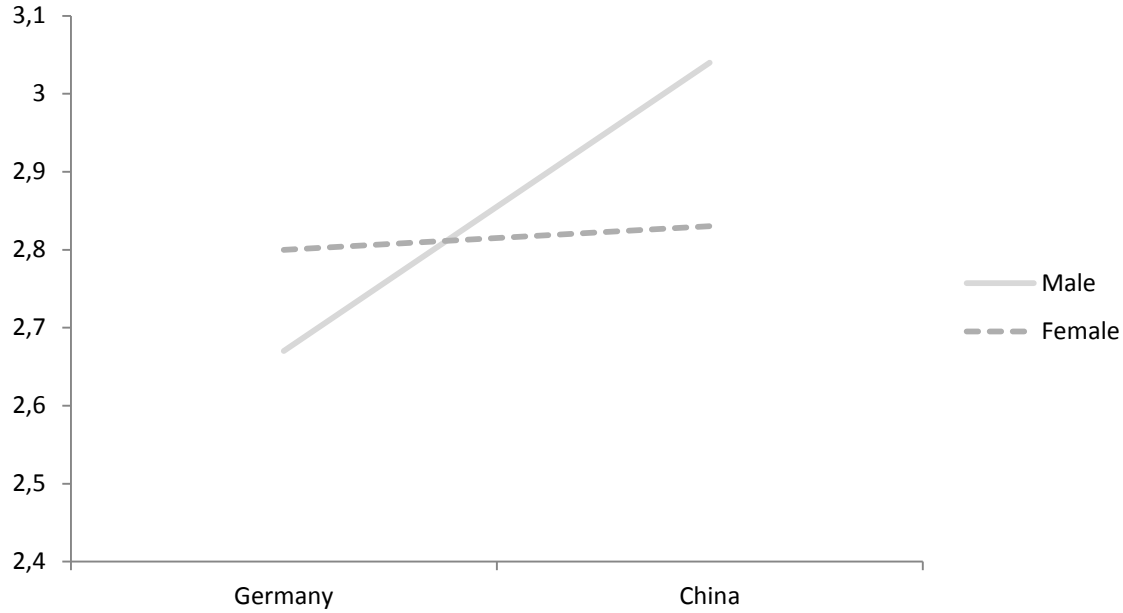
**Figure 2.1: Gender Differences on RSQ mean score between Two Nations**



The same analysis was conducted to test differences on the expectation of rejection between men and women in China and Germany, results demonstrated a main effect for nation that both Chinese male and female participants reported significant higher expectancy about rejection than their German counterparts,  $F(1, 446) = 8.65, p = .003$ . The interaction of nation and gender was also significant,  $F(1, 446) = 5.96, p = .015$ . Simple effect further revealed that Chinese males reported higher expectancy about rejection than Chinese females ( $p = .028$ ) and German males ( $p = .001$ ).

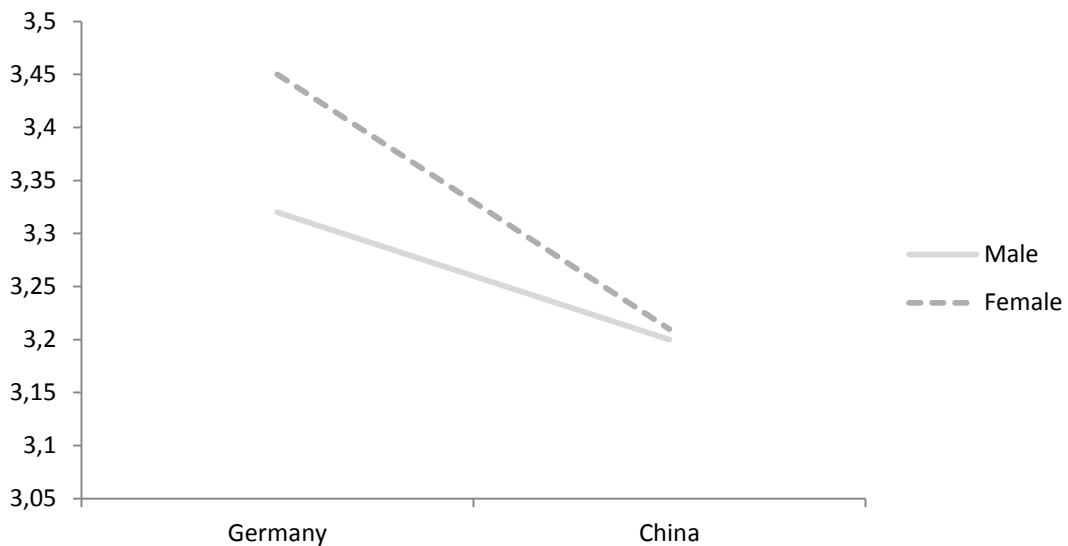


**Figure 2.2: Gender Differences on RSQ-expectation Subscale between Two Nations**



However, with regard to anxiety about rejection, there is only a main effect for nation, indicating both German male and female participants reported significantly higher anxiety than their Chinese counterparts,  $F(1,446) = 4.19, p = .04$ .

**Figure 2.3: Gender Differences on RSQ-anxiety Subscale between Two Nations**



## Discussion

One of the aims of the current study was to examine the psychometric properties of the Chinese RSQ. The Chinese RSQ demonstrated good internal consistency in all the three study samples. In terms of criterion-related validity, in the undergraduate sample, the RSQ had significant positive associations with symptoms of depression, anxiety, somatization, and borderline personality disorder symptomatology, while a significant negative association with general self-efficacy was also found. Particularly, the hypothesis that there are high correspondences between RS and BPD and depressive symptoms, was supported by our data of the clinical sample. These findings are consistent with our hypotheses and indicate good convergent and divergent validity. Regarding the strength of the correlation, the association between RS and depression are in accordance with the American version (Correlation score on the Beck Depression Inventory is  $r=0.35$ ,  $n=303$ , Downey & Feldman, 1996). The one-factor model of the Chinese RSQ is in line with the previous study. Research on the American version and German version of the RSQ both suggested a one-factor solution for the scale's factor structure (Downey & Feldman, 1996; Staebler et al., 2011).

Furthermore, our study enriches the knowledge about the association between somatization, hostility, and interpersonal sensitivity. Past research suggests there are

links between RS and hostility; in one series of studies, compared to low RS peers, females with high RS had a stronger implicit cognitive association between rejection and hostility (Ayduk, Downey, Testa, Yen, & Shoda, 1999). Another research indicated that compared to their low RS peers, high RS males are more likely to react aggressively to their romantic partners (Downey, Feldman, & Ayduk, 2000); the significantly positive correlation between the RSQ and the hostility subscale of SCL-90-R supports the empirical findings with measurement data.

Interpersonal sensitivity is a construct that refers to “undue and excessive awareness of and sensitivity to the behavior and feelings of others” (Boyce & Parker, 1989); some scholars considered it as a similar construct as “rejection sensitivity”, while other researchers hold that “interpersonal rejection sensitivity could be a more descriptive label to avoid confusion with the common conception of interpersonally sensitive/aware individuals and better describe the fear and discomfort associated with perceived interpersonal rejection” (Harb, Heimberg, Fresco, Schneier, & Liebowitz, 2002). In our study, RSQ mean scores correlated with the IS score of SCL-90-R at a 0.38 level, is close to the 0.48 level of Downey’s finding. In addition, the positive correlation between somatization and rejection sensitivity might be an interesting point and has seldom been discussed in the literature.

## Study 1

The second aim of the current study was to explore the potential cultural differences and cross-cultural roles of rejection sensitivity. It is notable that most RS research was conducted in Western countries, such as the United States, Australia, Germany and Holland, while in general, western cultures are identified as individualist cultures, and many East Asian countries were recognized as collectivist cultures (Hofstede, 1980, Triandis, McCusker & Hui, 1990; Giebels & Yang, 2009), which might lead to some cultural differences in rejection sensitivity due to the different attitudes towards relationships: collectivists would compromise to maintain a relationship while individualists are reluctant to sacrifice their own interests (Giebels & Yang, 2009). There was only one study in the literature which investigated cultural differences in the consequences of interpersonal rejection (Garris, Ohbuchi, Oikawa, & Harris., 2011), significant differences emerged between Japanese participants and American participants. Further analyses exhibited culture-based partial mediation and that compared to American participants, Japanese participants reported higher rejection sensitivity and more past rejection history. Such findings offered a new perspective to explain the etiology of rejection sensitivity in both theoretical and practical ways. The fact that German and Chinese participants in current study showed significant differences on RS has wider implications from a cross-cultural perspective.

The current study has several limitations. First, as an attempt to validate the RSQ for general adults, the samples recruited in our study have a relatively limited age range (18-65), further study should expand the scope in this regard, and a longitudinal study can be a better way to explore the changes with time. Second, for the further implication of the Chinese RSQ in a clinical setting, more samples are needed. And third, the cultural differences of rejection sensitivity were observed in terms of the nation, which might not be accurate enough.

Notwithstanding these limitations, the current study demonstrated the good psychometric properties of the Chinese RSQ (factor structure, internal consistency, convergent and divergent validity). Together with the RSQ's theoretical link with several constructs (hostility, interpersonal sensitivity, and somatization, acculturation), the findings of the current study render the Chinese RSQ a useful research tool to assess this cognitive-affective processing disposition and further study on the cultural difference of RS is warranted.

**Study 2: Rejection Sensitivity, Cultural Adaptation, General Self-efficacy and Well-Being of Chinese Student Sojourners in Germany**

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**Chapter 3**

## **Abstract**

Rejection sensitivity (RS) originates from past experiences of rejection and underlies interpersonal problems. The transition into a new culture implies raising possibilities of rejection and interpersonal challenges. Therefore, the current study examined the role of rejection sensitivity in the process of cultural transition and the relationship between rejection sensitivity and sojourners' well-being through cultural adaptation and self-efficacy. A sample of 119 Chinese student sojourners in Germany took part in a survey assessing rejection sensitivity, cultural adaptation, self-efficacy, depressive symptoms and quality of life. Results indicated that RS is a significant predictor for sojourners' cultural adaptation, quality of life as well as depressive symptoms. While the relationship between rejection sensitivity and depressive symptoms was mediated by psychological adaptation, sociocultural adaptation served as a mediator between rejection sensitivity and sojourners' quality of life. General self-efficacy was identified as a protective factor for both depressive symptoms and quality of life. The findings introduced rejection sensitivity as a significant individual variable of the cultural transition process.

## Introduction

The evidence that social rejection has a negative impact on individuals' well-being and interpersonal functioning is compelling (see reviews by MacDonald, & Leary, 2005; Slavich, O'Donovan, Epel, & Kemeny, 2010). Experiences of rejection are painful but also part of our life—especially when we are abroad.

At a macro level, from the Mesopotamia rulers established regulations for commerce with foreigners in 2370 B.C. to the United Kingdom's referendum on their European Union membership in 2016, the dynamics of rejection within intercultural contacts has been present throughout history.

At an individual level, since sojourners need to establish new social ties for adapting as a stranger in an unfamiliar culture while their old social ties in their home country may weaken because of the distance, a situation with increasing possibility of being rejected arises easily from the sojourn. Rejection and related pain could come from a variety of sources for sojourners living abroad, to make matters worse, it is often difficult to detect whether what you are experiencing is a real rejection or is just a normal reaction towards an issue in a different cultural setting. For example, you may never know why people refuse to rent an apartment to you even when you have enough money in your bank account, it could be simply because you are a student without a salary, or the untold reason is that you are a foreigner. There would also be occasions when you are trying hard to communicate your ideas in a foreign language, but people seem like not listening to you. Subsequently, you are looking for an explanation, e.g., that you didn't express yourself clearly and you try to improve your language skills afterwards, while another explanation could be that people are not interested either in your topic or you, which can be interpreted as a sign of rejection and evoke emotions like hostility and



anger. Such instances of subtly confusing reasonable reactions with personal rejection in light of the intercultural background could be multiplied indefinitely, not to speak of the misunderstandings caused by cultural differences and language barriers.

All these possibilities and confusions about being rejected highlight the significance of coping with potential rejection in the process of cultural transition. In line with this claim, several studies identified social rejection as one major stressor in the process of cultural adaptation (Sandhu, Asrabadi, 1994; Ying, 2005; Hernández, Hernández, & González, 2011; Yu, et al., 2014). Geeraert and Demoulin (2013) also reported perceived social exclusion significantly predicted sojourners' stress. However, not all sojourners are overwhelmed by rejection. While one person gets stuck in the feeling of being rejected, the other takes the same situation as a challenge instead of feeling rejected and stays in high spirit. One mechanism explaining individuals' different perception of and reaction to potential rejection is a personality disposition named rejection sensitivity (RS) by Downey and Feldman. RS refers to the tendency of being anxious about and readily perceiving rejection in interpersonal interactions. Such hypervigilance to rejecting clues is theorized to result from past experiences of rejection by significant others. Individuals high in RS tend to have great anxiety and magnified perception of rejection toward ambiguous or even neutral situations (Downey & Feldman, 1996). It has long been recognized that high RS individuals incline to avoid rejection by retreating into social withdrawal and loneliness (e.g., Watson & Nerdale, 2012; Zimmer-Gembeck, Nerdale, Webb, Khatibi, & Downey 2016), self-silencing and false self behaviors (e.g., Harper, Dickson, & Welsh, 2006; Goldner, Abir, & Sachar, 2016), aggression (e.g., Ayduk, Gyurak, & Luerksen, 2008; Bondü & Richter, 2016) or ingratiation (e.g., Romero-Canyas, et al., 2010).

Besides interpersonal difficulties and behavioral problems mentioned above, a wide range of research has also associated high level of RS with psychological distress and

## Study 2

psychopathology (see reviews by Stafford, 2007; Rosenbach & Renneberg, 2011). For example, an investigation conducted with 92 patients with borderline personality disorder and 75 participants in the healthy control group by Bungert et al. (2015) confirmed RS is related to both the number of BPD features and symptom severity. Another clinical research of Ng & Johnson (2013) showed bipolar I patients had heightened RS compared to patients without mood disorders and linked RS with lower quality of life and poorer psychosocial outcome. Among the long list of mental health conditions, it is noteworthy that depression appeared to be one of the most frequent clinical consequences with RS (e.g., Ayduk, Downey, & Kim, 2001; Gilbert, Irons, Olsen, Gilbert, & McEwan, 2006; McCarty, Stoep, & McCauley, 2007; Liu, Kraines, Massing-Schaffer, & Alloy, 2014; Norona, Roberson, & Welsh, 2016).

Furthermore, echoing empirical findings and clinical observations, both the fourth and the fifth editions of the Diagnostic and Statistical Manual of Mental Disorders (i.e., DSM-IV, DSM-V) identified RS as a hallmark of atypical depression.

Given the impact of RS as personality disposition on individuals' interpersonal relationship and well-being, it is plausible to expect that RS would play a role in sojourners' cross-cultural experience which entails a rising possibility of social rejection. More specifically, it is conceivable that sojourners with high RS are less likely to interact with available local resources and are reluctant to seek for others' help and support when confronting difficulties in an unfamiliar cultural environment, thereby hindering their adjustment and experiencing more stress.

Whereas there is substantial research regarding the deleterious influence of different kinds and sources of rejection on sojourners' cultural adaptation and well-being (e.g., Kim, Cain, & McCubbin, 2006: parental acceptance–rejection; Grünigen, Perren, Nägele, & Alsaker, 2010: peer acceptance-rejection; Barlow, Sibley, & Hornsey, 2012; Geeraert, & Demoulin, 2013: race-based rejection from majority group members; Ferenczi, Marshall,

& Bejanyan, 2015: rejection from heritage culture members), surprisingly, only a few studies have investigated the mechanism related to expectation of, perception of and reaction to rejection in the context of cross-cultural experiences. Notably, originating from Mendoza-Denton's work on the population of African Americans, a growing body of research has detected positive correlations between race-based rejection sensitivity (Mendoza-Denton, Page-Gould, & Pietrzak, 2006; Richeson, & Sommers, 2016), ethnic minority individuals' poor academic performance (Wolfgramm, Morf, & Hannover, 2014) and health problems including HIV risk, depressive symptoms, obesity etc. (Haymen Jr, McIntyre, & Abbey, 2015; Han et al., 2015; Brittian et al., 2015). Although due to the fact that race-based RS is defined as a disposition evolved by accumulating the experiences of being rejected for status characteristics (Chan & Mendoza-Denton, 2008), most of race-based RS research targeted the population of immigrants rather than sojourners, these findings are still worth referencing.

In the case of sojourners, to the best of my knowledge, so far there has been no research on the impact of sojourners' RS on cultural adaptation and well-being. Therefore, drawing on these different lines of research mentioned above, the current study considers rejection sensitivity as an interpersonal vulnerability variable influencing sojourners' adaptation process and outcomes. In this light, bringing demographical (age, gender, the length of residence in Germany, relation status, major area, English proficiency, German proficiency), intrapersonal (self-efficacy), interpersonal (RS) and cultural adaptation (psychological and sociocultural adaptation) factors together, the current study aimed to examine the role rejection sensitivity plays in the process of cultural transition and its interactions with cultural adaptation. Additionally, the impact of self-efficacy was also examined as a conceptually contrary measure to RS (Watson & Nesdale, 2012).

## **Research Questions and Hypotheses in the Current Study**

Specifically, this thesis focused on Chinese student sojourners' adaptation in Germany and attempted to investigate the following questions:

- 1) How high is the level of depression in the population of Chinese student sojourners in Germany?
- 2) How is the quality of life of Chinese student sojourners in Germany compared to their domestic peers?
- 3) How do the relevant variables impact on student sojourners' quality of life and depressive symptoms?
- 4) Does rejection sensitivity predict student sojourners' psychological adaptation and sociocultural adaptation?

Hypothesis 1a: Chinese sojourners with higher RS show a lower level of psychological adaptation.

Hypothesis 2b: Chinese sojourners with higher RS have a lower level of sociocultural adaptation.

- 5) How does the interplay between rejection sensitivity, cultural adaptation, and general self-efficacy affect Chinese student sojourners' well-being?

Hypothesis 1: Cultural adaptation mediates the relationship between rejection sensitivity and student sojourners' well-being, i.e. depression symptoms level and quality of life.

Hypothesis 2: General self-efficacy mediates the relationship between rejection sensitivity and student sojourners' well-being, i.e. depression symptoms level and quality of life.

## Method

### Sample

Aiming to detect at least a medium size effect for hierarchical regression analysis in the cross-sectional survey (Cohen's  $f^2 = 0.15$ , Cohen, 1988), a priori test was conducted using the software G\*Power (Faul, Erdfelder, Buchner, & Lang, 2009), with a power of 0.80 and an alpha level of .05; 6 covariates were chosen according to primary studies (age, gender, residence time in Germany, relationship status, language confidence in English, language confidence in German) in the first block and 4 predictors (RS, general self-efficacy, sociocultural adaptation, psychological adaptation) in the second, a sample size of 85 was determined. Accordingly, efforts were made to achieve around 7:4 oversampling which would ensure medium size effect detection.

Participants were recruited by e-mails to a nation-wide mailing list of the CASD (Vereinigung Chinesischer Akademischer und Studentischer Gesellschaften in Deutschland e.V.) as well as through posters and leaflets which were handed out in several gatherings of Chinese sojourners in Berlin, Leipzig, and Braunschweig. Recipients were asked to fill out a set of inventory either in a pencil-paper version or through an online survey using Google form<sup>1</sup> from March 2014 to April 2015. There were 144 responses in the cross-sectional survey. After examination of the demographic information and email addresses, 5 were found to be duplicate submissions by the system or participants, done mistakenly, and these duplications were deleted. Moreover, since this study is specially targeted at the population of student sojourners, 20 participants were excluded from the analysis because 14 of them had a full-time job, e.g., visiting scholars, while the other 6 were students but indicated they had made decisions

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1) <https://www.google.com/forms/about/>

## Study 2

to stay in Germany permanently.

As a result, 119 Chinese student sojourners (63 male, 56 female; mean age = 26.21 years, SD = 2.55) living in 23 cities of Germany met the criteria for the cross-sectional survey. On average, participants resided in Germany for 21.13 months (SD = 14.66). About half (48.7%) of them were studying in Germany as master students, 40.3% were pursuing their doctoral degree and the rest (10.9%) were studying as undergraduate students. More than half of the participants major in science and engineering (58%), the rest were in liberal arts, for instance, humanities (21%) and 19.3% in social sciences. 52.9% of the participants were in a committed relationship (including 48 being partnered and 15 being married) while 46.2% were not; 71.4 % participants shared rooms with other people and 26.1% lived alone.

Additionally, to understand the relation between RS and cultural adaptation in a longer term, participants were contacted again via email after one academic year and were asked to complete the same set of measures using Google form. 37 participants (21 males and 16 females) finished the second assessment.

## Measures

**Demographic Information.** As part of the survey, participants were asked about information on their gender, age, relationship status, residence time and residence place in Germany, majors, ethnicity, religion, living situations, social net usage preference and so on. Especially, participants were asked to report their perceived stress pertaining to cultural adaptation and offer information about their language usage including the main languages they used in their academic and daily life, self-rated English and German proficiency and the language difficulties they have met in their academic and daily life in Germany respectively.

**Quality of Life.** A brief version of the World Health Organization Quality of Life assessment (WHOQOL-BRIEF) was administered; the WHOQOL-BREF is developed as a short version of the WHOQOL-100 and has proved to be a cross-culturally valid assessment of well-being (Skevington, S. M., Lotfy, M., & O'Connell, K. A., 2004). In the present sample, the scale's internal consistency was  $\alpha = 0.89$ .

**Cultural Adaptation Scales.** The Brief Sociocultural Adaptation Scale (BSAS) and the Brief Psychological Adaptation Scale (BPAS) were used. The scales demonstrated good reliability and adequate structural equivalence across languages (Demes, & Geeraert, 2014). In the present sample, BSAS' internal consistency was  $\alpha = 0.80$ ; BPAS' internal consistency was  $\alpha = 0.75$ .

**Depressive Symptoms.** Center for Epidemiological Studies-Depression Scale (CES-D; detail see in Study 1) was administered. In the present sample, the scale's internal consistency was  $\alpha = 0.90$ .

**Self-efficacy.** The Generalized Self-Efficacy Scale (GSES, detail see in Study 1) was administered. In the present sample, the scale's internal consistency was  $\alpha = 0.86$ .

**Rejection Sensitivity** (RSQ-8 items, detail see in Study 1). In the present sample, the

scale's internal consistency was  $\alpha = 0.79$ .

## **Analysis**

All analyses were conducted with SPSS statistics 23. A total of 12 hierarchical, multiple regressions were performed with 4 series of models: 1) a set of incorporating variables predicting quality of life, 2) a set of incorporating variables predicting depressive symptoms, 3) rejection sensitivity predicting sociocultural adaptation, and 4) rejection sensitivity predicting psychological adaptation. Control variables, such as age, residence time in Germany, English proficiency, German proficiency, study area and relation status were incorporated respectively into the first block of the regression analyses model based on the preliminary analysis, then the predictors were entered into the second block.

Simple and multiple mediation analyses were then conducted with the PROCESS macro (Hayes, 2013). In the first step, psychological adaptation was chosen as the mediator between rejection sensitivity and depressive symptoms, while sociocultural adaptation was used as a mediator between rejection sensitivity and sojourners' quality of life. Second, general self-efficacy was added to the mediation models. Bias-corrected bootstrapping with 5,000 resamples was employed; the result provided 95% confidence intervals for direct, indirect, and total effects.



## Results

### Descriptive Results

Means and standard deviations of the self-report measures at first assessment of 119 participants are presented in Table 3.1. Additionally, a summary for the 37 participants who completed the second assessment is also provided. According to paired sample t-test, all the outcomes showed no significant difference between t1 and t2.

**Table 3.1: Descriptive Statistics**

Measure	Time 1 All participants <sup>a</sup>		Time 1 Repeated Participation <sup>b</sup>		Time 2	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
RS	9.05	3.97	9,36	4,69	9,03	4,49
RS-anxiety	3.16	.96	3,20	1,02	3,27	,98
RS-expectation	2.68	.66	2,74	,74	2,59	,68
General self-efficacy	2,98	,43	2,95	,44	3,01	,43
Psychological adaptation	4,63	,91	4,70	,88	4,56	,94
Sociocultural adaptation	5,23	,73	5,26	,71	5,21	,78
Depressive symptoms	14,78	10,46	14,49#	11,15#	16,05#	8,91#
Quality of life	266,64	50,93	268,37	54,12	264,91	48,20

Note. a: n=119; b: n=37 except for depressive symptoms. #: n=20.

To answer the first research question regarding the mental health of Chinese sojourners in Germany, according to the criteria established by the authors of the CESD-20 (Radloff, 1977) , scores of 16 and above are considered “high risk” for depression: our results indicated that 68.4% of the current sample was in the high-risk range for depression. It is also notable that participants attributed a mean value of 38.22% of their perceived stress to the challenge of cultural adaptation. With reference to the results of previous research, several comparisons were made between the current sample and their Chinese local peers and German peers. The current sample reported higher levels of depressive symptoms than their Chinese local peers (the CES-D score of 18-30 age group norms of Chinese urban area

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normative sample:  $M = 12.32$ ,  $SD = 10.22$ ; Zhang et al., 2010;  $t(118) = 4.36$ ,  $p < .05$ ; Chinese college students sample:  $M = 11.4$ ,  $SD = 7.8$ ; Zhang, et al., 2015;  $t(118) = 3.81$ ,  $p < .001$ ) as well as German college students sample ( $M = 10.78$ ,  $SD = 7.8$ ; Rosenbach, 2014;  $t(118) = 4.50$ ,  $p < .001$ ) and the nonclinical normative sample of Germany ( $M = 11.16$ ,  $SD = 7.99$ ; Hautzinger & Bailer, 1993;  $t(118) = 4.08$ ,  $p < .001$ ).

In order to address the second research question about Chinese sojourners' quality of life in Germany, the score on quality of life was compared to a sample of Chinese college students ( $n=1890$ ) in the physical, psychological, social, and environment domains respectively ( $M_{\text{physical}} = 13.3$ ,  $SD = 2.1$ ;  $M_{\text{psychological}} = 14.3$ ,  $SD = 2.3$ ;  $M_{\text{social}} = 14.6$ ,  $SD = 2.6$ ;  $M_{\text{environment}} = 13.3$ ,  $SD = 2.1$ ; Zhang, et al., 2015). The current sample presented higher scores on the physical ( $t(118) = 8.71$ ,  $p < .001$ ) and environment domain ( $t(118) = 9.05$ ,  $p < .001$ ), on the other hand, a lower score on social relationship domain ( $t(118) = -4.52$ ,  $p < .001$ ) was also reported.

Independent samples t-tests were then performed to compare the differences regarding the major variables of interest: depressive symptoms, quality of life, rejection sensitivity, self-efficacy, sociocultural adaptation, psychological adaptation on the categorical demographic variables such as gender, living situation and relationship status. Particularly, due to different academic requirements on German language and culture knowledge, the study area was also included as an important demographic variable. Results indicated that no significant differences in the primary variables in gender and living situation were found (see Table 3.2.). However, participants in a committed relationship reported a higher level of quality of life ( $M=271.88$ ,  $SD=51.61$ ) than participants who were 'not in a committed relationship' ( $M=251.57$ ,  $SD=48.04$ ;  $t=116$ ,  $p<0.05$ ). Furthermore, participants majoring in science and engineering presented significantly higher scores on rejection sensitivity and depressive symptoms while reporting significantly lower German proficiency and psychological adaptation than

participants majoring in liberal arts (see details in Table 3.2).

**Table 3.2: Independent samples t-tests: major in science and engineering vs. major in liberal arts**

Variable (n=117)#	Science and Engineering (n=69)	Liberal arts (n=48)
German proficiency***	M = 2.55; SD = 1.15	M = 3.27; SD = 1.01
Rejection sensitivity*	M = 9.78; SD = 4.29	M = 7.91; SD = 3.29
Depressive symptoms**	M = 16.76; SD =12.00	M = 11.98; SD = 7.19
Psychological adaptation*	M = 4.37.; SD =.83	M = 4.77; SD = .82

Note. \*  $p < .05$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$ . #: 2 among 119 participants did not provide information about their study area.

Correlation analyses were conducted to examine the relationship between continuous variables. Results (see Table 3.3) showed that age was significantly correlated with sociocultural adaptation ( $r = .28, p < .01$ ), residence time was also associated with sociocultural adaptation ( $r = .29, p < .01$ ) and expectation of rejection ( $r = .20, p < .01$ ), German proficiency had positive correlations with general self-efficacy ( $r = .26, p < .01$ ) and quality of life ( $r = .24, p < .01$ ), but was negatively associated with rejection sensitivity ( $r = -.32, p < .01$ ), expectation of rejection( $r = -.26, p < .01$ ), anxiety ( $r = -.26, p < .01$ ) and depressive symptoms( $r = -.32, p < .01$ ). Additionally, Table 3.4 provided the correlations of primary variables between two assessments as supporting information.

Based on these preliminary results, relation status, study area, age, residence time in Germany, and German proficiency were included respectively as control variables in the further analysis.

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**Table 3.3: Correlations of Demographic and Primary Variables**

Variable (n=119)	2	3	4	5	6	7	8	9	10	11	12
1. Age	.53**	-.06	-.20*	-.10	-.12	-.06	-.10	.11	.28**	.01	.14
2. Residence time in Germany		.02	.08	-.18	-.15	-.21*	-.00	.07	.29**	-.06	.14
3. English proficiency			-.02	-.08	-.04	-.17	.13	.10	.09	.04	.01
4. German proficiency				-.32**	-.26**	-.26**	.26**	.17	.08	-.32**	.24*
5. Rejection sensitivity					.85**	.81**	-.33**	-.41**	-.41**	.50**	-.51**
6. RS-Anxiety						.46**	-.15	-.42**	-.40**	.38**	-.36**
7. RS-Expectation							-.42**	-.20*	-.26**	.39**	-.45**
8. General self-efficacy								.22*	.13	-.45**	.47**
9. Psychological adaptation									.52**	-.48**	.43**
10. Sociocultural adaptation										-.31**	.44**
11. Depressive symptoms											-.67**
12. Quality of life											

Note. \*  $p < .05$ , \*\*  $p < .01$ .

**Table 3.4: Correlations of Primary Variables between t1 and t2**

Variable (n=37)#	RS (t2)	GSE (t2)	PA (t2)	SA (t2)	DS (t2)	QoL (t2)
Rejection sensitivity (t1)	.68**	-.43**	-.46**	-.43**	.38	-.63**
RS-Anxiety Subscale (t1)	.49**	-.19	-.43**	-.26	.32	-.54**
RS-Expectation Subscale (t1)	.64**	-.51**	-.26	-.33*	.35	-.58**
General self-efficacy (t1)	-.20	.46**	.24	.31	-.39	.51**
Psychological adaptation (t1)	-.38*	.37*	.48**	.30	-.13	.44**
Sociocultural adaptation (t1)	-.55**	.31	.36*	.57**	-.36	.54**
Depressive symptoms (t1)	.37*	-.42**	-.35*	-.18	.58**	-.50**
Quality of life (t1)	-.47**	.44**	.45**	.47**	-.51*	.80**

Note. #: the sample size is 37 except for that of depressive symptoms, which is only 20 due to an omission of the CESD scale; \*  $p < .05$ , \*\*  $p < .01$ .

## **Integrated Models for Sojourners' Well-being**

### **Predictors of Sojourners' Quality of Life**

As the preliminary analysis indicated, there were significant associations among the demographic (i.e., relation status, German proficiency), interpersonal (i.e., rejection sensitivity), intrapersonal (i.e., general self-efficacy), cross-cultural variables (i.e., sociocultural adaptation and psychological adaptation) and sojourners' quality of life.

As part of the answer to our third research question, i.e., to investigate the relationship between these variables of interest and quality of life of sojourners, a series of multiple regression analyses was conducted and a summary of results is presented in Table 3.5.

First, relation status and German proficiency, as related demographic variables, were included in a basic model. Both relation status and German proficiency were significant predictors of sojourners' quality of life. Subsequent models were built on this basic model by adding the relevant variables.

Rejection sensitivity was entered in Model 2.1 as an interpersonal variable. The interpersonal model explained 19% more of the variance in quality of life than the basic model,  $F(3,114) = 14.95, p < .001$ , with RS significantly predicting sojourners' lower quality of life ( $\beta = -.47, p < .001$ ).

Next, based on Model 2.1, general self-efficacy, as an intrapersonal variable, was added to Model 2.2. Unsurprisingly, it significantly improved the model by explaining 11% more of the variance,  $F(4,113) = 17.66, p < .001$ , indicating that self-efficacy is a significant predictor of sojourners' quality of life ( $\beta = .35, p < .001$ ).

Model 2.3 included sociocultural adaptation and psychological adaptation as cross-cultural variables. This addition also improved the model,  $F(5,112) = 18.40, p < .001, \Delta R^2 = .06$ , with sociocultural adaptation ( $\beta = .28, p < .001$ ) positively related with higher quality of life, whereas psychological adaptation was not a significant predictor for quality of life.

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Since the demographical variables were insignificant in Models 2.1, 2.2, and 2.3, Model 3 was built with RS, general self-efficacy, and sociocultural adaptation variables. Overall, this simplified model explained 43% of the variance,  $F(3,115) = 29.22, p < .001$ , with general self-efficacy and sociocultural adaptation significantly and positively associating with sojourners' quality of life, while rejection sensitivity was significantly and negatively associated with quality of life. Moreover, regarding the construct of RS, a stepwise regression analysis revealed that expectation of rejection ( $\beta = -.23, p < .01, \Delta R^2 = .04$ ) was a significant predictor of quality of life while anxiety was not.

### **Predictors of Depressive Symptoms**

The same sequence of multilevel regression for depressive symptoms was calculated (also see Table 3.5). It should be noted that although participants' depressive symptoms significantly varied from their study area and correlated with German proficiency, only German proficiency was a statistically significant predictor of sojourners' depressive symptoms in the basic model (Model 1), thus only German proficiency was considered in the following models.

The addition of rejection sensitivity (Model 2.1) significantly improved model 1,  $F(2,116) = 22.08, p < .001, \Delta R^2 = .16$ , with rejection sensitivity positively associated with depressive symptoms ( $\beta = .44, p < .001$ ). Looking at Model 2.2, in contrast to rejection sensitivity, self-efficacy negatively associated with depressive symptoms ( $\beta = -.30, p < .001$ ) and significantly increased the variances explained by Model 2.1,  $F(3,115) = 21.10, p < .001, \Delta R^2 = .08$ . Turning to Model 2.3 which added sociocultural adaptation and psychological adaptation as cross-cultural variables, the model was also significantly better,  $F(4,114) = 21.08, p < .01, \Delta R^2 = .07$ . However, sociocultural adaptation could not statistically predict the level of depressive symptoms while psychological adaptation emerged as a significant predictor that negatively associated with sojourners' depressive symptoms ( $\beta = -.29, p < .001$ ).

## Rejection Sensitivity: A Cross-cultural Perspective

Finally, a simplified model was built integrating RS, general self-efficacy and psychological adaptation variables. This model explained 41% of variance in depressive symptoms,  $F(3,115) = 26.98, p < .001$ , self-efficacy ( $\beta = -.30, p < .001$ ), and psychological adaptation ( $\beta = -.30, p < .001$ ) seems to be a protective predictor of sojourners' depressive symptoms, while RS appears as a risk factor for depressive symptoms ( $\beta = .20, p < .001$ ). Additionally, a stepwise regression analysis indicated anxiety about rejection was a significant predictor of depressive symptoms ( $\beta = .20, p < .05, \Delta R^2 = .02$ ) whereas expectation of rejection was not.

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**Table 3.5: Multiple Regression Models for Predictors of Sojourners' Quality of Life and Depressive Symptoms**

Variables	Quality of Life					Depressive Symptoms				
	Model 1 Basic Model Demographical	Model 2.1 Interpersonal Addition	Model 2.2 Intrapersonal Addition	Model 2.3 Cross-cultural Addition	Model 3 Simplified Model	Model 1 Basic Model Demographical	Model 2.1 Interpersonal Addition	Model 2.2 Intrapersonal Addition	Model 2.3 Cross-cultural Addition	Model 3 Simplified Model
Intercept	205.41***	289.16***	172.81***	58.73	88.89*	25.69***	9.39**	28.67***	44.75***	42.63***
Relation Status	.18*	.11	.13	.12						
German Proficiency	.22*	.08	.02	.04		-.26*	-.18*	-.13*	-.12	
Study Area						-.16				
Rejection Sensitivity		-.47***	-.37***	-.25**	-.29***		.44***	.36***	.25**	.20***
Self-efficacy			.35***	.34***	.34***			-.30***	-.28***	-.30***
Sociocultural Adaptation				.28***	.28***					
Psychological Adaptation									-.29***	-.30***
$R^2$	.09	.28	.39	.45	.43	.12	.28	.36	.43	.41
$R^2$ change		.19	.11	.06			.16	.08	.07	
F change	5.67**	30.58***	18.80***	13.52***	29.22***	7.69**	27.82***	14.14***	8.91**	26.98***

Note: Standardized betas are reported. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .



## **The Interplay between RS, Cultural Adaptation, and GSE**

### **Rejection Sensitivity as a Predictor of Cultural Adaptation**

Pearson's correlation suggested that rejection sensitivity was negatively correlated with sociocultural adaptation ( $r = -.41, p < .001$ ) and psychological adaptation ( $r = -.41, p < .001$ ) of student sojourners. Taking the relevant demographic variables (i.e., variables which were proved to be statistically significant in preliminary analyses) into account, one hierarchical regression analysis with sociocultural adaptation as dependent variable, age, residence time in Germany, German proficiency and study area as control variables in the first block, rejection sensitivity as a predictor in the second block was then conducted to test hypothesis 1a. Respectively, another hierarchical regression analysis with psychological adaptation as a dependent variable, German proficiency and study area as control variables in the first block, rejection sensitivity as a predictor in the second block was conducted to test hypothesis 1b.

After checking model assumptions (e.g., normality of residuals, homogeneity, linearity), the results revealed a predictive relation between rejection sensitivity and cultural adaptation (see Table 3.6). Both models were statistically significant, respectively predicted 24% and 21% of the variance of sociocultural adaptation and psychological adaptation in Germany. RS significantly increased the variances explained by the control

## Study 2

variables in two models, specifically, for sociocultural adaptation,  $\Delta R^2 = .12$ ,  $p < .001$ ; for psychological adaptation,  $\Delta R^2 = .14$ ,  $p < .001$ . Furthermore, when deconstructing rejection sensitivity to anxiety and expectation of rejection, hierarchical regression analyses indicated that anxiety was a significant predictor of sociocultural adaptation as well as psychological adaptation, while the expectation of rejection was not (see table 3.7).

**Table 3.6: Hierarchical Regression of Sociocultural Adaptation and Psychological Adaptation (a)**

Hierarchical Variables	$R^2$	$\Delta R^2$	$\Delta F$	$B$	$SE$	$\beta$
Sociocultural Adaptation						
1. Control Variables	.12		3.85**			
2. Predictors	.24	.12***	17.26***			
Control Variables						
Study Area				.07	.13	.05
Age				.05	.03	.16
Residence Time in Germany				.01	.01	.14
German Proficiency				-.02	.06	-.04
Predictor						
Rejection Sensitivity				-.07	.02	-.37***
Psychological Adaptation						
1. Control Variables	.06		3.92*			
2. Predictors	.21	.14***	19.92***			
Control Variables						
Study Area				.27	.15	.16
German Proficiency				-.02	-.07	-.02
Predictor						
Rejection Sensitivity				-.09	-.02	-.40***

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; Discrepancy due to omitting of decimal fractions smaller than 0.5.

**Table 3.7: Hierarchical Regression of Sociocultural Adaptation and Psychological Adaptation (b)**

Hierarchical Variables	$R^2$	$\Delta R^2$	$\Delta F$	$B$	$SE$	$\beta$
Sociocultural Adaptation						
1. Control Variables	.12		3.85**			
2. Predictors	.23	.11***	7.91***			
Control Variables						
Study Area				.08	.14	.05
Age				.05	.03	.16
Residence Time in Germany				.01	.01	.14
German Proficiency				-.02	.06	-.02
Predictors						
RS-Anxiety				-.23	.08	-.30**
RS-Expectation of Rejection				-.12	.11	-.10
Psychological Adaptation						
1. Control Variables	.07		2.65			
2. Predictors	.22	.16***	10.98***			
Control Variables						
Study Area				.24	.15	.14
Residence time in Germany				-.001	.01	-.01
German Proficiency				.01	.07	.02
Predictors						
RS-Anxiety				-.36	.09	-.41***
RS-Expectation of Rejection				-.04	.13	-.03

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; Discrepancy due to omitting of decimal fractions smaller than 0.5.

## Cultural Adaptation and GSE as Mediators of the Relationship between RS and

### Well-being

In order to test hypothesis 2, i.e., to investigate the relationship between rejection sensitivity, cultural adaptation and sojourners' well-being, mediation analyses were conducted with conditional process analysis. Based on the regression results reported above, sociocultural adaptation was taken as a mediator for the relationship between RS

## Study 2

and quality of life, whilst psychological adaptation was considered as a mediator between RS and depressive symptoms.

Table 3.8 revealed RS indirectly influenced sojourners' quality of life through its effect on sociocultural adaptation ( $B_{\text{indirect}} = -1.45, p < .01$ ), the bias-corrected bootstrap 95% confidence interval for the indirect effect did not include zero (- 2.84 to -.48), indicating that sociocultural adaptation is a mediator between rejection sensitivity and sojourners' quality of life, but its mediation effect only partially obscures the direct relation between RS and quality of life, with the direct effect of RS on quality of life being still significant ( $B_{\text{direct}} = -5.08, p < .001$ ). The whole model explained 33% of the variance in quality of life.

**Table 3.8: Sociocultural adaptation as a mediator of the relationship between RS and QoL**

IV	DV		Coeff.	SE	p	95%CI	
						LL	UL
Rejection sensitivity	Quality of life	Total effect	-6.54	1.01	< .001		
		Direct effect	-5.08	1.06	< .001		
		Indirect effect through SA	-1.45	.60	.007	-2.84	-.48

*Note.* IV = independent variable; DV = dependent variable; CI = confidence interval; LL = lower level; UL = upper level.  $R^2 = .33, F(2,116) = 28.40, p < .001$ .

\* The direct effect of sociocultural adaptation on quality of life was positive.

The second model (see Table 3.9) demonstrated that the relationship between rejection sensitivity and depressive symptoms was partially mediated by psychological

adaptation ( $B_{\text{indirect}} = .33, p = .003, CI = .16 \text{ to } .58$ ). The model accounted for 33% of the variance in depressive symptoms.

**Table 3.9: psychological adaptation as a mediator of the relationship between rejection sensitivity and depressive symptoms**

IV	DV		Coeff.	SE	p	95%CI	
						LL	UL
Rejection sensitivity	Depressive Symptoms	Total effect	1.23	.20	< .001		
		Direct effect	.90	.21	< .001		
		Indirect effect through PA	.33	.10	.003	.16	.58

*Note.* IV = independent variable; DV = dependent variable; CI = confidence interval; LL = lower level; UL = upper level.  $R^2 = .33, F(2,116) = 29.17, p < .001$ .

\*The direct effects of rejection sensitivity on psychological adaptation and psychological adaptation on depressive symptoms were negative.

The mediation analyses above suggested that there might be other mediator variables between RS and sojourners' wellbeing outcome since both sociocultural adaptation and psychological adaptation only partially mediated the relationship. Thus general self-efficacy was also added to the two models as the second mediator. Table 3.10 shows that general self-efficacy significantly mediated the relation between RS and QoL/depressive symptoms (on quality of life,  $B_{\text{indirect}} = -1.42, p = .004, CI = -2.77 \text{ to } -.57$ ; on depressive symptoms,  $B_{\text{indirect}} = .24, p = .008, CI = .10 \text{ to } .48$ ). General self-efficacy not only significantly improved the mediation model on quality of life by explaining an additional 11% of variance,  $F(3,115) = 29.22, p < .001$ , but also accounted for 8% more of variance in

## Study 2

depressive symptoms,  $F(3,115) = 26.98, p < .001$ . However, even with the addition of general self-efficacy, the direct effect of RS on quality of life as well as on depressive symptoms stayed significant.

**Table 3.10: general self-efficacy as the second mediator in the relationship between RS and QoL**

IV	DV		Coeff.	SE	p	95%CI	
						LL	UL
RS	Quality of life <sub>a</sub>	Total effect	-6.54	1.01	< .001		
		Direct effect	-3.66	1.03	< .001		
		Indirect effect through SA	-1.46	.57	.004	-2.84	-.53
		Indirect effect through GSE	-1.42	.54	.004	-2.77	-.57
	Depressive Sytoms <sub>b</sub>	Total effect	1.23	.20	< .001		
		Direct effect	.69	.20	<.001		
		Indirect effect through PA	.30	.11	.003	.13	.57
		Indirect effect through GSE	.24	.10	.008	.10	.48

*Note.* IV = independent variable; DV = dependent variable; CI = confidence interval; LL = lower level; UL =upper level; *a*:  $R^2 = .43, F(3,115) = 29.22, p < .001$ ; *b*:  $R^2 = .41, F(3,115) = 26.98, p < .001$ . \*the direct effects of rejection sensitivity on psychological adaptation, general self-efficacy and psychological adaptation on depressive symptoms were negative.

## **Discussion**

Rather than previous research that focused on specific social identity-related RS, i.e., race-based rejection sensitivity, the current study is the first one to examine the role that a general sense of rejection sensitivity plays in cultural transition as well as the interplay occurring between rejection sensitivity, cultural adaptation and well-being of sojourners. Results generally supported the hypotheses we proposed based on the theories of rejection sensitivity and cultural adaptation. Specifically, RS was revealed as a strong predictor for both cultural adaptation (i.e., sociocultural adaptation and psychological adaptation) and the wellbeing variables (i.e., quality of life and depressive symptoms). Besides, significant correlations between RS (t1) with the outcome variables (i.e., sociocultural adaptation, psychological adaptation, quality of life, depressive symptoms) of the second assessment also provided support for this conclusion. Further analysis demonstrated that the impact of rejection sensitivity on depressive symptoms as well as quality of life was mediated by psychological adaptation and sociocultural adaptation respectively. In other words, RS indirectly influenced sojourners' level of depressive symptoms and quality of life through the route of cultural adaptation. Higher RS was related to the lower levels of sociocultural adaptation and psychological adaptation, which in turn increased the risk of depression and lowered the level of quality of life.

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Moreover, self-efficacy was associated positively with the adjustment outcome in previous research (Lee, & Ciftci, 2014). In this study, the addition of general self-efficacy as a second mediator also significantly increased the amount of variance explained in depressive symptoms and quality of life. To be more specific, for people who have a high level of RS, a high level of general self-efficacy may reduce the risks of developing depressive symptoms and experiencing low quality of life. However, the indirect effects of cultural adaptation and general self-efficacy together only partially mediated the relation between RS and the two well-being variables. RS still maintains a significant direct effect on depressive symptoms and quality of life, suggesting that for the population of student sojourners, RS has unique relationships with depressive symptoms and quality of life, which could go beyond the impacts of cultural adaptation and general self-efficacy.

Taken together, these findings illustrated RS' significant role for sojourners' adaptation and well-being in the context of cultural transition. On the basis of the acculturation process model (Berry et al., 1987; Ward & Geeraert, 2016), the experience of cultural transition can be regarded as a series of life events with changes and stress during the adapting process, psychological characteristics could serve as significant individual variables which affect the way people cope with the novel environment (Zhou, Jindal-



Snape, Topping, & Todman, 2008; Zhang, Mandl, & Wang., 2010). Particularly, given that efforts are needed to grapple with the frequent problem about feeling rejected or isolated while staying abroad (Geeraert, & Demoulin, 2013), it follows the expectation that individuals' differences in dealing with potential rejection would impact their social interactions and thus the adaptation outcomes. From the perspective of rejection sensitivity theory, individuals who have heightened concern about being rejected, i.e., high rejection sensitivity, are prone to readily perceive and overreact to rejection (real or imagined), resulting in difficulties with building and maintenance of positive relationships and even in consequence of mental health issues, for instance, anxiety and depression (Downey, Feldman, Khuri, & Friedman, 1994; Ayduk, Downey & Kim, 2001; Khoshkam, Bahrami, Ahmadi, Fatehizade, & Etemadi; 2012). It is thus hypothesized that rejection sensitivity would negatively associate with cultural adaptation and sojourners' well-being. The results of this study supported this inference and in parallel with the research link race-based rejection sensitivity positively with immigrants' psychological distress and lower adaptation (Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002; Chan, & Mendoza-Denton, 2008; Wolfgramm, Morf, & Hannover, 2014). These findings are also consistent with Ward's theoretical construct of cultural adaptation by distinguishing the impact of psychological adaptation on depressive symptoms from the

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influence of sociological adaptation on quality of life.

Remarkably, the phenomenon that depressive symptoms are highly prevalent in the sample of Chinese student sojourners also merits further discussion, especially when compared with their peers in China and Germany. On the other hand, our participants also reported substantial stress pertaining to cultural adaptation. Following this clue, a possible explanation for such 'collective depression' could be acculturative stress which these Chinese sojourners perceived during cultural transition. Interestingly, in comparison with the same group of Chinese local college students who appeared less depressive, Chinese sojourners in Germany reported a significantly higher level of quality of life on physical and environment domains while presenting a significantly lower level of quality of life on social relationship domain. The findings are consistent with the study Kuwahara (2010) conducted in the US, which reported the population of Japanese sojourners has a higher quality of life than that of college students in Japan as well as the Japanese general population norm, whereas sojourners also showed four times higher risk for significant mental health problems than their counterparts. The seeming contradiction could be a reflection of both pros and cons of sojourn life. On the one hand, the high risk for depressive symptoms points to the adverse effects relocating can have on the student sojourners and underlines the need to raise awareness of

potential mental health issues, and on the other hand, the relatively high quality of life also sheds light on the positive side of studying abroad.

In addition, albeit not part of the study hypotheses, the significant effect of study area difference appears as an important contextual factor which is often ignored in research.

The preliminary findings of the current study indicate that Chinese student sojourners who major in science and engineering presented lower psychological adaptation, higher depressive symptoms, and higher levels of rejection sensitivity than those who studied in liberal arts. However, when study area and German proficiency were entered together as control variables for this outcome, the impact of study area difference seemed obscured by German proficiency, hence, the disparity in German proficiency between the two groups might account for the gap. Since English is the only foreign language taught for most of the students in the Chinese education system, plus its popularity in science and engineering, Chinese sojourners studying in this area often rely on English for academic and daily communication even when they are in Germany, while the others would have more motivation to learn German. On the surface, the choice to skip German could save a lot of time, however, our results suggest the invisible cost of this kind of expedient might need more consideration. Interestingly, another finding in this study showed sojourners under 25 years of age have better German proficiency yet less social adaptation than the

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group of sojourners who are older than 25. A possible explanation may be that younger sojourners have to face both the cultural transition and life-stage changes from adolescence to adulthood, which could cause more difficulties and conflicts to fit in. Further research is needed to explore the full implications of these findings.

This study has several limitations. First, data were obtained in a specific group of sojourners, which limits its generalization to other sojourner groups. Second, a bigger sample size is needed to investigate the causal relationship in a longitudinal study. Therefore, in order to replicate and verify the findings, future studies should expand both the sample size and scope to other groups of ethnicities and countries.

Overall, findings in this study gave an initial insight into the role of RS in the process of cultural transition. It seems that rejection sensitivity theory can contribute to a better understanding of sojourners' cultural transition experience and how relevant variables interact to influence wellbeing outcome.

## General Discussion

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### Chapter 4

#### Discussion of Main Results

Although feeling rejected is universally painful regardless of where you live, most research of rejection sensitivity has been conducted in western cultures and little attention has been paid to this mechanism of processing rejection in the context of eastern cultures.

As is generally acknowledged, while the Chinese culture places special emphasis on the importance of maintaining “face” (Aslani, et al., 2016), endorsement of collectivism, restraint on emotional expressions and low uncertainty avoidance seem to be a cultural pattern in China (Hofstede, 1983, 2011; Wang, & Mallinckrodt, 2006). Through the lens of these cultural implications, social rejection in Chinese daily life is usually supposed to be conveyed implicitly, rather than overtly or directly (Li, 2015). By contrast, German culture features a more direct communication style, high degrees of individualism and uncertainty avoidance (Hofstede, 1983, 2011), in which rejection could be much more explicit than in Chinese culture. So, questions about rejection sensitivity in different

## General Discussion

cultures were posed: Are there cultural differences in rejection sensitivity? Specifically, would Chinese be more sensitive to rejection than Germans since they have to speculate more on implicit signs of rejection?

Study 1 addressed this question in two ways. First, a German version of the RSQ was translated into Chinese. Semantic and conceptual equivalence were assured by the standard procedure (i.e. forward translations and back-translations, pilot study). The results of CFA analyses offered satisfactory adaptation for the Chinese RSQ on construct, metric, and scalar equivalence with German RSQ. In regard to criterion-related validity, the positive correlations between the Brief Symptom Inventory, the Interpersonal sensitivity and Hostility subscales of Symptom Check List-90-Revised(SCL-90-R), the McLean Screening Instrument for Borderline Personality Disorder, and the Center for Epidemiological Studies-Depression Scale were also supported in the Chinese college students sample. They were highlighted in the clinical sample and results were also consistent with the findings in previous research with the German RSQ as well as the American version RSQ (Downey & Feldman,1996; Staebler et al.,2011). Thus, the Chinese RSQ seems to measure the same theoretical construct. The retest-reliability was also good. The evidence is convincing, underlining the high stability of RS as a trait characteristic. Overall, the Chinese RSQ proved to be a valid and reliable measure of

rejection sensitivity in China and is eligible for cross-cultural comparison.

Next, the comparison between the Chinese and German nonclinical sample illustrated intriguing culture differences. Out of our expectation, Chinese participants did not show higher rejection sensitivity than their German counterparts. On the contrary, German participants reported higher rejection sensitivity. Looking further into the details of RS, we found the difference in rejection sensitivity between the two groups was due to Chinese participants' significantly higher expectancy of rejection and significantly lower anxiety about rejection than those of German participants'. The apparent paradox actually fits into our proposition about Chinese and German cultural differences in expressing rejection and handling uncertainty. Germans tend to avoid uncertainty and the direct way of expressing rejection is more common in Germany. In contrast, Chinese are relatively comfortable with ambiguity and more familiar with implicit rejection, thus it can be presumed that the two cultural groups would demonstrate different cognitive (i.e., expectation) and affective (i.e., anxiety) responses to the same hypothetical situations entailing potential rejection. In other words, our results reflect the underlying cultural patterns and provide a new window into a better understanding of rejection sensitivity.

Theoretically, rejection sensitivity is formed by early and past experiences of rejection

## General Discussion

and plays a significant role in the establishment and development of interpersonal relationship as well as individuals' well-being. When it comes to relocating to a new culture and society, the challenges concerning potential rejection could be extensive; however, there is little research on the impact of rejection sensitivity in the process of cultural transition for sojourners. In light of this, Study 2 extended the research of RS to Chinese sojourners' cross-cultural experience. Investigations were conducted to paint a picture of Chinese student sojourners' well-being in Germany and attempted to answer the following questions: Which variables are related with sojourners' well-being? Particularly, is rejection sensitivity a significant factor for the well-being of Chinese sojourners? How is the impact of RS translated into sojourners' well-being outcomes in the context of cultural transition?

Regarding the well-being of Chinese sojourners in Germany, on the one hand, our participants experienced a higher level of depressive symptoms than their peers in China and Germany, accompanied by lower quality of life in the social relationship domain, which exemplifies a negative situation Chinese sojourners have to deal with. This finding is in line with previous research of Chinese sojourners in other countries which reported high prevalent mental health problems and difficulties in social relationship (Han, Han, Luo, Jacobs, & Jean-Baptiste, 2013; Chen, Liu, Zhao, & Yeung, 2015). On the other hand,



sojourners also reported higher quality of life in the physical and environmental domains, which may depict the positive aspect of sojourn life. The difference in the psychological domain between Chinese sojourners and their peers in China was not significant which can be attributed to the fact that this domain of WHOQOL-BREF not only asks for mental health but also inquires about perceived joy and meaning in life; aspects that could get stronger through the cross-cultural experience (Zimmermann, & Neyer, 2013). Conjointly, the results capture a contrastive picture of sojourn life, which provides a more comprehensive view for future research on sojourners' well-being.

To identify significant factors of sojourners' well-being, preliminary analyses identified correlations between several variables (i.e., German proficiency, relation status, study area, rejection sensitivity, general self-efficacy, and cultural adaptation), a series of follow-up examinations were then conducted. Results showed that cultural adaptation and general self-efficacy serve as protective factors to promote sojourners' well-being, while rejection sensitivity functions as a risk factor for reduced well-being. Further analyses revealed that RS is a significant predictor for cultural adaptation; moreover, the partial effect of RS is translated into sojourners' wellbeing outcomes by lowering sojourners' level of cultural adaptation and general self-efficacy.

These findings are not only consistent with previous research with respect to the impact

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of general self-efficacy (Harrison, Chadwick, & Scales, 1996; Goldstein, & Keller, 2015) and cultural adaptation on sojourners' well-being (Demes, & Geeraert, 2014), but also support the hypothesis about the role of rejection sensitivity in the process of cultural transition. As an up-to-now rarely considered variable concerning sojourners' cross-cultural experience, RS is introduced thereon as a variable with considerable influence on sojourners' adaptation and well-being.

Additionally, it is also noteworthy to mention that both study 1 and study 2 found the anxiety and the expectation of rejection to function as different aspects of rejection sensitivity. In study 1, significant cultural differences regarding these two aspects were demonstrated, which is unprecedented and warrants further research. Study 2 detected the different effects of the two aspects, while expectation of rejection was more associated with quality of life; anxiety about rejection was a significant predictor of depressive symptoms. These results are partially in line with results of the study of Rosenbach (2013) that reported depressive symptoms were more associated with the anxiety about rejection while borderline symptoms were accompanied with higher expectation of rejection.

## **Implications for Clinical and Educational Practice**

Several implications for clinical and educational practice have arisen from the current study. First of all, our study showed that the Chinese version of the RSQ is valid both in nonclinical and clinical populations. Particularly, due to the impact of rejection sensitivity in the development of psychopathology and the fact that little attention was paid to the assessment of RS in Chinese clinical setting, applying our Chinese RSQ clinically could help psychiatrists and psychologists understand more about their patients' interpersonal problems and related psychopathological issues. For instance, borderline personality disorder is not officially included in the Chinese mental health diagnostic system (Zhong & Leung, 2007), consequently, there are limited research tools applying to the Chinese BPD population, the cultural comparisons about its etiopathology and symptomatology is underprovided. Since RS has been recognized as a distinctive vulnerability related with BPD (Bungert et al., 2015; Berenson et al., 2016), using the Chinese RSQ in the clinical setting might help with the acknowledgement, treatment and further research of BPD in China.

Second, the findings in study 2 have high practical relevance with educational interventions and training programs for sojourners' relocating experience. As the results showed in study 2, depressive symptoms are prevailing in Chinese sojourners'

## General Discussion

population, with RS, cultural adaptation and general self-efficacy highly related with it. Therefore, awareness should be raised to improve the mental health condition of this population, and efforts can be made by effective interventions of the specific variables. For example, psychoeducation about the self-fulfilling prophecy of rejection sensitivity as well as the cultural pattern differences of rejection may be a practical idea to help sojourners to recognize and understand more about their difficulties. Exercise modules including effective intervention techniques such as vicarious experience and goal setting (Ashford, Edmunds, & French, 2010) to promote general self-efficacy could also be helpful for sojourners when facing challenges.

Third, while there were no effects of demographical variables on sojourners' well-being in the regression analyses of study 2, it should be noted that German proficiency was significantly correlated with sojourners' rejection sensitivity and general self-efficacy whereas English proficiency was insignificant with all the major variables of interest. This finding highlights the significance of local language usage as a specific feature of cross-cultural situation in a non-English-speaking country.

Last but not least, given the different effects we observed between anxiety and expectation of rejection, it is highly recommended to take these two aspects into account in future research for a better understanding of RS.

## **Strengths, Limitations, and Future Directions**

The current study has several strengths in its goals and design. Foremost among them are the emphasis and efforts to adapt a cross-cultural equivalence of the RSQ. Moreover, compared to the other Chinese assessments of RS (Zhao, Li & Zhang, 2012), our Chinese RSQ was validated in both clinical and nonclinical sample and can be applicable in a larger scope in terms of age and occupation, i.e., is not limited to a college students sample. In addition, we applied a state-of-the-art measurement for cultural adaptation (Demes & Geeraert, 2014) which provides the operationalization of cultural adaptation with a context specificity of cross-cultural experience; avoids the typical confounding in previous research that mismatched the outcome of cultural adaptation with general well-being. Lastly, a clear concept of *sojourner* and the precise inclusion criteria for our participants in study 2 form the basis to draw conclusions and implications.

There are also several limitations in the current study. First, all the measures were self-reported and rejection sensitivity of sojourners was not assessed before their relocation experiences. In addition, due to practical reasons, the clinical sample was a relatively small sample in study 1 which limited further comparison between groups with different diagnoses. And the sample size for the second assessment of sojourners in study 2 was too small to offer information about causal relation between variables.

## General Discussion

Suggestions for future research are offered in light of the implications, strengths, and limitations mentioned above. To start, as alternative methods for self-report, future research can use objective indicators such as facial expressions elicited by rejection-relevant clues and a second opinion from significant others; in this light, an experimental design to detect the cultural difference of RS might be more accurate and the opinions of sojourners' supervisors or colleagues might be helpful to have thorough information about the aspect of cultural adaptation. Future research should consider enlarging the clinical sample size for further comparisons of cultural psychopathology; pre-departure and longitudinal data of sojourners are needed for a deeper exploration. It would also be beneficial to develop specific interventions for sojourners' cultural adaptation and well-being based on the current study.

## Summary

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Rejection Sensitivity is viewed as the dynamic processing of specific situations entailing potential rejection, in which a cognitive response (i.e., expectations of rejection) and an affective response (i.e., anxiety about rejection) are activated and interact with each other. Individuals with high rejection sensitivity are supposed to anxiously expect, readily perceive, and overreact to the threat of rejection and thereby getting into a vicious cycle with repeated experiences of rejection, negative interpersonal consequences and negative well-being. Due to the influence of different culture patterns, it was assumed there might be differences concerning the processing of rejection between German and Chinese individuals.

To explore the potential cultural difference regarding rejection sensitivity, the first part of the current research provided a validated measurement of rejection sensitivity (in total, n=617 participants) with cross-cultural equivalence between China and Germany.

Based on the Chinese RSQ's good psychometric properties, we consider it as a promising tool for the assessment of rejection sensitivity in China as well as for cultural comparison.

Interesting cultural differences were found between Chinese and German nonclinical samples (223 participants for each country). Corresponding to the cultural patterns'

## Summary

differences in expression of rejection and attitude towards uncertainty, Chinese participants demonstrated significantly higher expectancy of rejection and significantly lower anxiety about rejection. They reported lower overall rejection sensitivity than their German counterparts. Study 1 exhibited rejection sensitivity as a universal construct with cultural variations.

To determine the relevance of rejection sensitivity to the process of cultural transition for Chinese sojourners in Germany, study 2 investigated the relationship between Chinese sojourners' well-being in Germany and individual-level variables including cultural adaptation, general self-efficacy and rejection sensitivity. The results took a comprehensive picture of the Chinese student sojourners' life (n=119) and confirmed rejection sensitivity to be a significant predictor of sojourners' well-being and cultural adaptation for the first time. Further analyses revealed that partial effects of rejection sensitivity on sojourners' well-being are mediated by general self-efficacy and cultural adaptation. General self-efficacy and cultural adaptation are protective factors for sojourners' well-being. In addition, the current research provided evidence for the cognitive-affective processing model of rejection sensitivity with the independent effect of the cognitive and affective aspect of RS exhibited in the current research. The empirical data offered support to the theoretical work of rejection sensitivity and warrant future



research.

In summary, the current research has attempted to understand the nature of rejection sensitivity from a cross-cultural scope and to further elucidate the interaction between rejection sensitivity, cultural adaptation, general self-efficacy and well-being. The findings make contributions to the knowledge of rejection sensitivity by measurement adaptation and research area extension.

Further research should focus on verifying these first indicators in experimental and longitudinal studies. In addition, a higher awareness of mental health in the population of student sojourners should be promoted.

## References

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- Ainsworth, M. S., & Bowlby, J. (1991). An ethological approach to personality development. *American psychologist*, 46(4), 333.
- Altbach, P. G., & Teichler, U. (2001). Internationalization and exchanges in a globalized university. *Journal of Studies in International Education*, 5(1), 5-25.
- Ashford, S., Edmunds, J., & French, D. P. (2010). What is the best way to change self - efficacy to promote lifestyle and recreational physical activity? A systematic review with meta - analysis. *British journal of health psychology*, 15(2), 265-288.
- Aslani, S., Ramirez - Marin, J., Brett, J., Yao, J., Semnani - Azad, Z., Zhang, Z. X., ... & Adair, W. (2016). Dignity, face, and honor cultures: A study of negotiation strategy and outcomes in three cultures. *Journal of Organizational Behavior*.
- Austauschdienst, D. A. (2016). Wissenschaft Weltoffen 2016. Daten und Fakten zur Internationalität von Studium und Forschung in Deutschland. Online: <http://www.wissenschaftweltoffen.de>.
- Ayduk, O., Downey, G., & Kim, M. (2001). Rejection sensitivity and depressive symptoms in women. *Personality and Social Psychology Bulletin*, 27(7), 868-877.
- Ayduk, O., Downey, G., Testa, A., Yen, Y., & Shoda, Y. (1999) Does rejection elicit hostility in rejection sensitive women? *Social Cognition*, 17, 245-271.
- Ayduk, Ö., & Gyurak, A. (2008). Applying the Cognitive - Affective Processing Systems Approach to Conceptualizing Rejection Sensitivity. *Social and personality psychology compass*, 2(5), 2016-2033.
- Ayduk, Ö., Gyurak, A., & Luerssen, A. (2008). Individual differences in the rejection-aggression link in the hot sauce paradigm: The case of rejection sensitivity. *Journal of experimental social psychology*, 44(3), 775-782.

## Rejection Sensitivity: A Cross-cultural Perspective

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Barlow, F. K., Sibley, C. G., & Hornsey, M. J. (2012). Rejection as a call to arms: Inter-racial hostility and support for political action as outcomes of race-based rejection in majority and minority groups. *British Journal of Social Psychology*, 51(1), 167-177.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin*, 117(3), 497.
- Berenson, K. R., Gregory, W. E., Glaser, E., Romirowsky, A., Rafaeli, E., Yang, X., & Downey, G. (2016). Impulsivity, rejection sensitivity, and reactions to stressors in borderline personality disorder. *Cognitive Therapy and Research*, 1-12.
- Berry, J. W. (1995). 20. Psychology of Acculturation. *The culture and psychology reader*, 457.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review*, 46, 5-34.
- Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29, 697-712.
- Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International migration review*, 491-511.
- Bochner, S. (2006). Sojourners. *The Cambridge handbook of acculturation psychology*, 181-197.
- Boyce, P., & Parker, G. (1989). Development of a scale to measure interpersonal sensitivity. *Australian and New Zealand Journal of Psychiatry*, 23, 341-351.
- Brittian, A. S., Kim, S. Y., Armenta, B. E., Lee, R. M., Umaña-Taylor, A. J., Schwartz, S. J., ... & Castillo, L. G. (2015). Do dimensions of ethnic identity mediate the association between perceived ethnic group discrimination and depressive symptoms?

## References

*Cultural Diversity and Ethnic Minority Psychology*, 21(1), 41.

- Bungert, M., Liebke, L., Thome, J., Haeussler, K., Bohus, M., & Lis, S. (2015). Rejection sensitivity and symptom severity in patients with borderline personality disorder: effects of childhood maltreatment and self-esteem. *Borderline personality disorder and emotion dysregulation*, 2(1), 1.
- Butler, J. C.; Doherty, M. S.; Potter, R. M. (2007). Social antecedents and consequences of interpersonal rejection sensitivity. *Personality and Individual Differences*, 43(6), 1376–1385.
- Carlson, J. S., & Widaman, K. F. (1988). The effects of study abroad during college on attitudes toward other cultures. *International journal of intercultural relations*, 12(1), 1-17.
- Chan, W., & Mendoza-Denton, R. (2008). Status-Based Rejection Sensitivity Among Asian Americans: Implications for Psychological Distress. *Journal of Personality*, 76(5), 1317-1346.
- Chen, H., Zhong, J., Liu, Y.X., Lu, H.Y. (2011). Application of McLean Screening Instrument for Borderline Personality Disorder In Chinese Psychiatric Samples. *Chinese Journal of Clinical Psychology*, 19(5), 595-597.
- Chen, J. A., Liu, L., Zhao, X., & Yeung, A. S. (2015). Chinese International Students: An Emerging Mental Health Crisis. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(11), 879-880.
- Church, A. T. (1982). Sojourner adjustment. *Psychological bulletin*, 91(3), 540.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Demes, K. A., & Geeraert, N. (2014). Measures Matter Scales for Adaptation, Cultural Distance, and Acculturation Orientation Revisited. *Journal of Cross-Cultural Psychology*, 45(1), 91-109.

## Rejection Sensitivity: A Cross-cultural Perspective

Derogatis, L.R. (1994). Symptom Checklist 90–R: Administration, scoring, and procedures manual (3rd ed.). Minneapolis, MN: *National Computer Systems*.

Derogatis, L. R. (2000). The Brief Symptom Inventory–18 (BSI-18): Administration, Scoring and Procedures Manual. Minneapolis, MN: *National Computer Systems*.

Derogatis, L. R. and R. Unger (2010). Symptom Checklist - 90 - Revised. Corsini *Encyclopedia of Psychology*.

Downey, G., & Feldman, S. I. (1996). Implications of Rejection Sensitivity for Intimate Relationships. *Journal of Personality and Social Psychology*, 70, 1327-1343.

Downey, G., Feldman, S., & Ayduk, O. (2000). Rejection sensitivity and male violence in romantic relationships. *Personal Relationships*, 7, 45–61.

Downey, G., Feldman, S., Khuri, J., & Friedman, S. (1994). Maltreatment and childhood depression. In *Handbook of depression in children and adolescents* (pp. 481-508). Springer US.

Downey, G., Freitas, A. L., Michaelis, B., & Khouri, H. (1998). The self-fulfilling prophecy in close relationships: rejection sensitivity and rejection by romantic partners. *Journal of personality and social psychology*, 75(2), 545.

Downey, G., Khouri, H., & Feldman, S. I. (1997). Early interpersonal trauma and later adjustment: The mediational role of rejection sensitivity. Cicchetti, Dante (Ed); Toth, Sheree L. (Ed). *Developmental perspectives on trauma: Theory, research, and intervention.*, (pp. 85-114). Rochester, NY, US: University of Rochester Press, xvii, 613 pp.

Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science*, 302(5643), 290-292.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior research methods*, 41(4), 1149-1160.

Feldman, S., & Downey, G. (1994). Rejection sensitivity as a mediator of the impact of

## References

- childhood exposure to family violence on adult attachment behavior. *Development and Psychopathology*, 6(01), 231-247.
- Gadd, C. J. (1971). Code of Hammurabi. In W. E. Preece (Ed.), *Encyclopaedia Britannica* (Vol. 11, pp. 41–43). Chicago: William Benton.
- Garris, C. P., Ohbuchi, K. I., Oikawa, H., & Harris, M. J. (2011). Consequences of Interpersonal Rejection A Cross-Cultural Experimental Study. *Journal of Cross-Cultural Psychology*, 42(6), 1066-1083.
- Geeraert, N., & Demoulin, S. (2013). Acculturative stress or resilience? A longitudinal multilevel analysis of sojourners' stress and self-esteem. *Journal of Cross-Cultural Psychology*, 0022022113478656.
- Giebels, E., & Yang, H. (2009). Preferences for Third - Party Help in Workplace Conflict: A Cross - Cultural Comparison of Chinese and Dutch Employees. *Negotiation and conflict management research*, 2(4), 344-362.
- Gilbert, P., Irons, C., Olsen, K., Gilbert, J., & McEwan, K. (2006). Interpersonal sensitivities: Their links to mood, anger and gender. *Psychology and Psychotherapy: Theory, Research and Practice*, 79(1), 37-51.
- Global flow of tertiary-level students. (2014, May 5). Retrieved January 29, 2016, from UNESCO: <http://www.uis.unesco.org/EDUCATION/Pages/international-student-flow-viz.aspx>
- Goldner, L., Abir, A., & Sachar, C. S. (2016). Adolescents' True-Self Behavior and Parent-Adolescent Boundary Dissolution: The Mediating Role of Rejection Sensitivity. *Child Indicators Research*, 1-22.
- Goldstein, S. B., & Keller, S. R. (2015). US college students' lay theories of culture shock. *International Journal of Intercultural Relations*, 47, 187-194.
- Grinberg, L., & Grinberg, R. (1989). *Psychoanalytic perspectives on migration and exile*. New Haven, CT: Yale University Press.

- Grünigen, R., Perren, S., Nägele, C., & Alsaker, F. D. (2010). Immigrant children's peer acceptance and victimization in kindergarten: The role of local language competence. *British Journal of Developmental Psychology*, 28(3), 679-697.
- Guan, H. (2007). *Anpassung und Integration der chinesischen Studierenden in Deutschland- Eine Untersuchung anhand des Beispiels an der Universität Bremen*.
- Hair, J. F. (2009). *Multivariate data analysis*.
- Han, C. S., Ayala, G., Paul, J. P., Boylan, R., Gregorich, S. E., & Choi, K. H. (2015). Stress and coping with racism and their role in sexual risk for HIV among African American, Asian/Pacific Islander, and Latino men who have sex with men. *Archives of sexual behavior*, 44(2), 411-420.
- Han, X., Han, X., Luo, Q., Jacobs, S., & Jean-Baptiste, M. (2013). Report of a mental health survey among Chinese international students at Yale University. *Journal of American College Health*, 61(1), 1-8.
- Harb, G. C., Heimberg, R. G., Fresco, D. M., Schneier, F. R., & Liebowitz, M. R. (2002). The psychometric properties of the Interpersonal Sensitivity Measure in social anxiety disorder. *Behaviour research and therapy*, 40(8), 961-979.
- Harper, M. S., Dickson, J. W., & Welsh, D. P. (2006). Self-silencing and rejection sensitivity in adolescent romantic relationships. *Journal of Youth and Adolescence*, 35(3), 435-443.
- Harrison, J. K., Chadwick, M., & Scales, M. (1996). The relationship between cross-cultural adjustment and the personality variables of self-efficacy and self-monitoring. *International Journal of Intercultural Relations*, 20(2), 167-188.
- Hautzinger, M., & Bailer, M. (1993). *Allgemeine Depressionsskala*. Manual (General Depression Scale. Manual). Göttingen: Beltz Test GmbH.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Hayman Jr, L. W., McIntyre, R. B., & Abbey, A. (2015). The bad taste of social ostracism:

## References

- The effects of exclusion on the eating behaviors of African-American women. *Psychology & health*, 30(5), 518-533.
- He, J. (2009) *Investigating the acculturation strategies and adaptation outcomes of chinese students in Germany*. (Master thesis, Shanghai International Studies University).
- Henning, M. A., Krägeloh, C., Moir, F., Doherty, I., & Hawken, S. J. (2012). Quality of life: international and domestic students studying medicine in New Zealand. *Perspectives on medical education*, 1(3), 129-142.
- Hernández, J. A. R., Hernández, G. T., & González, Á. R. (2011). Acculturative stress in Latin-American immigrants: an assessment proposal. *The Spanish journal of psychology*, 14(01), 227-236.
- Hinkle, D.E.; Jurs, S.G.; Wiersma, W. *Applied statistics for the behavioral sciences*, 2nd ed.; Houghton Mifflin: Boston, MA, USA, 1988; p. 682.
- Hofstede, G. (1980). Dimension of national cultures in 50 countries and 3 regions. Expiscations in Cross-cultural Psychology. *Swets and Zeitlinger, Lisse*.
- Hofstede, G. (1983). National cultures in four dimensions: A research-based theory of cultural differences among nations. *International Studies of Management & Organization*, 13(1-2), 46-74.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. Online readings in psychology and culture, 2(1), 8.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- Jerusalem, M., & Schwarzer, R. (1981). General self-efficacy scale. Freie Universitat, Berlin, Gesundheitspsychologie, <http://web.fuberlin.de/gesund/skalen>, 1993, 2000.
- Jerusalem, M., & Schwarzer, R. (1992). Self-efficacy as a resource factor in stress appraisal



## Rejection Sensitivity: A Cross-cultural Perspective

processes. In: R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp.195-213). Washington, DC: Hemisphere.

Khawaja, N. G., & Dempsey, J. (2007). Psychological Distress in International University Students: An Australian Study. *Australian Journal of Guidance and Counselling*, 17(01), 13-27.

Khoshkam, S., Bahrami, F., Ahmadi, S. A., Fatehizade, M., & Etemadi, O. (2012). Attachment style and rejection sensitivity: The mediating effect of self-esteem and worry among Iranian college students. *Europe's Journal of Psychology*, 8(3), 363-374.

Kim, E., Cain, K., & McCubbin, M. (2006). Maternal and paternal parenting, acculturation, and young adolescents' psychological adjustment in Korean American families. *Journal of Child and Adolescent Psychiatric Nursing*, 19(3), 112-129.

Kim, E., Han, G., & McCubbin, M. A. (2007). Korean American maternal acceptance–rejection, acculturation, and children's social competence. *Family & community health*, 30, S33-S45.

Kim, M., Chen, J. L., Kools, S., & Weiss, S. (2016). The Impact of Personality Traits and Acculturation on the Mental Health of Korean American Adolescents. *Psychology*, 7(09), 1256.

Kim, Y. Y. (2000). *Becoming intercultural: An integrative theory of communication and cross-cultural adaptation*. Sage Publications.

Kramer, E. J., Kwong, K., Lee, E., & Chung, H. (2002). Cultural factors influencing the mental health of Asian Americans. *Western Journal of Medicine*, 176(4), 227.

Kuwahara, N. (2010). *Mental Health, Quality of Life and Gendered Experiences of Japanese Sojourner Graduate Students in the US*. ProQuest LLC. 789 East Eisenhower Parkway, PO Box 1346, Ann Arbor, MI 48106.

Lazarus, R. S., & Folkman, S. (1984). Stress. Appraisal, and coping, 456.

Lee, J. Y., & Ciftci, A. (2014). Asian international students' socio-cultural adaptation: Influence of multicultural personality, assertiveness, academic self-efficacy, and

## References

- social support. *International Journal of Intercultural Relations*, 38, 97-105.
- Leung, A. K. Y., & Cohen, D. (2011). Within-and between-culture variation: individual differences and the cultural logics of honor, face, and dignity cultures. *Journal of personality and social psychology*, 100(3), 507.
- Li, X. (2015) Interpersonal Acceptance-Rejection Research in Chinese Populations. International Society for Interpersonal Acceptance and Rejection Newsletter, Volume 9, Issue 1 (January 2015), pp. 2-5 and Issue 2 (May 2015), pp. 2-7.
- Link, B. G., Phelan, J. C., & Hatzenbuehler, M. L. (2014). Stigma and social inequality. In *Handbook of the Social Psychology of Inequality* (pp. 49-64). Springer Netherlands.
- Liu, M. (2012). *Studienerfolg und Metakognition* (Doctoral dissertation, lmu).
- Liu, R. T., Kraines, M. A., Massing-Schaffer, M., & Alloy, L. B. (2014). Rejection sensitivity and depression: mediation by stress generation. *Psychiatry*, 77(1), 86-97.
- London, B., Downey, G., Bonica, C., & Paltin, I. (2007). Social causes and consequences of rejection sensitivity. *Journal of Research on Adolescence*, 17(3), 481-506.
- London, B., Downey, G., Romero-Canyas, R., Rattan, A., & Tyson, D. (2012). Gender-based rejection sensitivity and academic self-silencing in women. *Journal of personality and social psychology*, 102(5), 961.
- MacDonald, G., & Leary, M. R. (2005). Why does social exclusion hurt? The relationship between social and physical pain. *Psychological bulletin*, 131(2), 202.
- Mao, X.Q., (2015). 留德中国大学生的跨文化适应现状. *Journal of World Education*, (7), 56-59.
- Ferenczi, N., Marshall, T. C., & Bejanyan, K. (2015). The protective and detrimental effects of self-construal on perceived rejection from heritage culture members. *Frontiers in psychology*, 6.

## Rejection Sensitivity: A Cross-cultural Perspective

- Marcus M, Yasamy MT, van Ommeren M, Chisholm D, Saxena S (2012) Depression: A Global Public Health Concern. WHO Dep. Ment. Health Subst. Abuse. [http://www.who.int/mental\\_health/management/depression/who\\_paper\\_depression\\_wfmh\\_2012.pdf](http://www.who.int/mental_health/management/depression/who_paper_depression_wfmh_2012.pdf)
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological review*, 98(2), 224.
- Marin, T. J., & Miller, G. E. (2013). The interpersonally sensitive disposition and health: An integrative review. *Psychological bulletin*, 139(5), 941.
- Maslow, A. (1954). *Motivation and Personality*. New York: Harper.
- McCarty, C. A., Stoep, A. V., & McCauley, E. (2007). Cognitive features associated with depressive symptoms in adolescence: Directionality and specificity. *Journal of Clinical Child and Adolescent Psychology*, 36(2), 147-158.
- Mendoza-Denton, R., Downey, G., Purdie, V. J., Davis, A., & Pietrzak, J. (2002). Sensitivity to status-based rejection: implications for African American students' college experience. *Journal of personality and social psychology*, 83(4), 896.
- Mendoza-Denton, R., Page-Gould, E., & Pietrzak, J. (2006). Mechanisms for coping with status-based rejection expectations. *Stigma and group inequality: Social psychological perspectives*, 151-170.
- Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological review*, 102(2), 246.
- Motti-Stefanidi, F., Pavlopoulos, V., Obradović, J., Dalla, M., Takis, N., Papathanassiou, A., & Masten, A. S. (2008). Immigration as a risk factor for adolescent adaptation in Greek urban schools. *European journal of developmental psychology*, 5(2), 235-261.
- Ng, T. H., & Johnson, S. L. (2013). Rejection sensitivity is associated with quality of life, psychosocial outcome, and the course of depression in euthymic patients with Bipolar I disorder. *Cognitive therapy and research*, 37(6), 1169-1178.

## References

- Nilsen, I. S. (2013). Parenting and Emotional Symptoms: Reported by Turkish Immigrant Mothers and Children.
- Norona, J. C., Roberson, P. N., & Welsh, D. P. (2016). Rejection sensitivity and depressive symptoms: Longitudinal actor-partner effects in adolescent romantic relationships. *Journal of adolescence*, 51, 6-18.
- OECD (2014), "Indicator C4: Who studies abroad and where?", in *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris.  
<http://dx.doi.org/10.1787/888933118656>
- OECD (2015), "Indicator C4 Who Studies Abroad and Where?", in *OECD, Education at a Glance 2015: OECD Indicators*, OECD Publishing, Paris. DOI:  
<http://dx.doi.org/10.1787/eag-2015-27-en>
- Oei, T. P., & Notowidjojo, F. (1990). Depression and loneliness in overseas students. *International Journal of Social Psychiatry*, 36(2), 121-130.
- Pan, Y. (2013). Auslandsstudienaufenthalt als Chance zur Förderung interkultureller Kompetenz–Eine empirische Untersuchung chinesischer Studierenden in Deutschland. *interculture journal: Online Zeitschrift für interkulturelle Studien*, 12(21), 71-80.
- Pietrzak, J., Downey, G., & Ayduk, O. (2005). Rejection sensitivity as an interpersonal vulnerability. *Interpersonal cognition*, 62-84.
- Plato. (1969). *Laws XII* (A. E. Taylor, Trans.). In E. Hamilton & H. Cairns (Eds.), *The collected dialogues of Plato* (pp. 1488–1513). Princeton, NJ: Princeton University Press.
- Polfuß, J. (2012). Kritischer Kulturassimilator Deutschland für chinesische Teilnehmende. *interculture journal: Online Zeitschrift für interkulturelle Studien*, 11(17), 27-48.
- Radloff, L. S. (1977). The CES-D scale a self-report depression scale for research in the general population. *Applied psychological measurement*, 1(3), 385-401.

- Rehg, M. T., Gundlach, M. J., & Grigorian, R. A. (2012). Examining the influence of cross-cultural training on cultural intelligence and specific self-efficacy. *Cross Cultural Management: An International Journal*, 19(2), 215-232.
- Renneberg, B. and A. Seehausen (2010). Questionnaire of Thoughts and Feelings (QTF)-A screening instrument for borderline-specific cognitions. *Z Klin Psychol Psychother* 39(3): 170-178.
- Renneberg, B., Schmidt-Rathjens, C., Hippin, R., Backenstrass, M., & Fydrich, T. (2005). Cognitive characteristics of patients with borderline personality disorder: development and validation of a self-report inventory. *Journal of Behavior Therapy and Experimental Psychiatry*, 36(3), 173-182.
- Renneberg, B. Rosenbach, C., (2011). Rejected, excluded, ignored: The perception of social rejection and mental disorders–A review. *English Version of Verhaltenstherapie* 21:87–97.
- Renneberg, B., Schmidt-Rathjens, C., Hippin, R., Backenstrass, M., & Fydrich, T. (2005). Cognitive characteristics of patients with borderline personality disorder: development and validation of a self-report inventory. *Journal of behavior therapy and experimental psychiatry*, 36(3), 173-182.
- Richeson, J. A., & Sommers, S. R. (2016). Toward a Social Psychology of Race and Race Relations for the Twenty-First Century. *Annual Review of Psychology*, 67, 439-463.
- Riva, P., Montali, L., Wirth, J. H., Curioni, S., & Williams, K. D. (2016). Chronic social exclusion and evidence for the resignation stage An empirical investigation. *Journal of Social and Personal Relationships*, 0265407516644348.
- Romero - Canyas, R., Downey, G., Berenson, K., Ayduk, O., & Kang, N. J. (2010). Rejection sensitivity and the rejection – hostility link in romantic relationships. *Journal of personality*, 78(1), 119-148.
- Rosenbach, C. (2014). *Rejection Sensitivity-etiological aspects and psychopathological impact* (Doctoral dissertation, Freie Universität Berlin).

## References

- Rosenbach, C., & Renneberg, B. (2015). Remembering rejection: specificity and linguistic styles of autobiographical memories in borderline personality disorder and depression. *Journal of behavior therapy and experimental psychiatry*, 46, 85-92.
- Ruben, B. D., & Kealey, D. J. (1979). Behavioral assessment of communication competency and the prediction of cross-cultural adaptation. *International Journal of Intercultural Relations*, 3(1), 15-47.
- Rudmin, F. W. (2003). Critical history of the acculturation psychology of assimilation, separation, integration, and marginalization. *Review of general psychology*, 7(1), 3.
- Rüsch, N., Corrigan, P. W., Wassel, A., Michaels, P., Olschewski, M., Wilkniss, S., & Batia, K. (2009). A stress-coping model of mental illness stigma: I. Predictors of cognitive stress appraisal. *Schizophrenia research*, 110(1), 59-64.
- Sandhu DS, Asrabadi BR (1994) Development of an acculturative stress scale for international students: Preliminary findings. *Psychol Rep* 75: 435–448.
- Sawir, E., Marginson, S., Deumert, A., Nyland, C., & Ramia, G. (2008). Loneliness and international students: An Australian study. *Journal of Studies in International Education*, 12(2), 148-180.
- Schmitt, A., & Falkai, P. (2014). Suicide ideation, stability of symptoms and effects of aerobic exercise in major depression. *European archives of psychiatry and clinical neuroscience*, 264(7), 555.
- Schulze, J., Gutz, L., & Renneberg, B. (2012, May). Ein effizienterer Weg um Zurückweisungsempfindlichkeit zu erfassen – Entwicklung einer Kurzversion des Rejection Sensitivity Questionnaires (RSQ). Poster session presented at the 30th Conference of German Psychological Association, Clinical Psychology and Psychotherapy Division, Luxemburg.
- Schwarzer, R. (2014). *Self-efficacy: Thought control of action*. Taylor & Francis.
- Schwarzer, R., & Fuchs, R. (1996). *Self-efficacy and health behaviours. Predicting health behaviour: Research and practice with social cognition models*, 163-196.

- Schwarzer, R., Bäßler, J., Kwiatek, P., Schröder, K., & Zhang, J. X. (1997). The assessment of optimistic self - beliefs: comparison of the German, Spanish, and Chinese versions of the general self-efficacy scale. *Applied Psychology*, 46(1), 69-88.
- Searle, W., & Ward, C. (1990). The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International journal of intercultural relations*, 14(4), 449-464.
- Sharkey, J. D., Sander, J. B., & Jimerson, S. R. (2010). Acculturation and mental health: Response to a culturally-centered delinquency intervention. *Journal of Criminal Justice*, 38(4), 827-834.
- Shafer, A. B. (2006). Meta - analysis of the factor structures of four depression questionnaires: Beck, CES - D, Hamilton, and Zung. *Journal of clinical psychology*, 62(1), 123-146.
- Sirin, S. R., Ryce, P., Gupta, T., & Rogers-Sirin, L. (2013). The role of acculturative stress on mental health symptoms for immigrant adolescents: A longitudinal investigation. *Developmental Psychology*, 49(4), 736.
- Siu, P. C. (1952). The sojourner. *American journal of Sociology*, 34-44.
- Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: psychometric properties and results of the international field trial. A report from the WHOQOL group. *Quality of life Research*, 13(2), 299-310.
- Slavich, G. M., O'Donovan, A., Epel, E. S., & Kemeny, M. E. (2010). Black sheep get the blues: a psychobiological model of social rejection and depression. *Neuroscience & Biobehavioral Reviews*, 35(1), 39-45.
- Smith, C., & Carlson, B. E. (1997). Stress, coping, and resilience in children and youth. *The Social service review*, 231-256.
- Smith, P. B., Easterbrook, M. J., Celikkol, G. C., Chen, S. X., Ping, H., & Rizwan, M. (2015). Cultural Variations in the Relationship Between Anger Coping Styles, Depression,

## References

- and Life Satisfaction. *Journal of Cross-Cultural Psychology*, 0022022115620488.
- Smith, P. B., Fischer, R., Vignoles, V. L., & Bond, M. H. (2013). *Understanding social psychology across cultures: Engaging with others in a changing world*. Sage.
- Smith, R. A., & Khawaja, N. G. (2011). A review of the acculturation experiences of international students. *International Journal of Intercultural Relations*, 35(6), 699-713.
- Song, J. (2009). Cultural experiences of German and Chinese exchange students and implications for a target group-oriented intercultural training program. Albert-Ludwigs-Universität Freiburg, Freiburg, Germany. Retrieved from [http://www.freidok.uni-freiburg.de/volltexte/6821/pdf/Diss\\_final\\_Freidok.pdf](http://www.freidok.uni-freiburg.de/volltexte/6821/pdf/Diss_final_Freidok.pdf).
- Staebler, K., Helbing, E., Rosenbach, C., & Renneberg, B. (2011). Rejection sensitivity and borderline personality disorder. *Clinical psychology & psychotherapy*, 18(4), 275-283.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*.
- Torres, J. B., & Solberg, V. S. (2001). Role of self-efficacy, stress, social integration, and family support in Latino college student persistence and health. *Journal of vocational behavior*, 59(1), 53-63.
- Triandis, H. C., McCusker, C., & Hui, C. H. (1990). Multimethod probes of individualism and collectivism. *Journal of personality and social psychology*, 59(5), 1006.
- Uriely, N. (1994). Rhetorical ethnicity of permanent sojourners: The case of Israeli immigrants in the Chicago area. *International Sociology*, 9(4), 431-445.
- Van Praag, H. M., & Plutchik, R. (1984). Depression type and depression severity in relation to risk of violent suicide attempt. *Psychiatry research*, 12(4), 333-338.
- Wang, Y.Y, Leung, F., Zhong, J. (2008). The Adaptation of McLean Screening Instrument for Borderline Personality Disorder Among Chinese College Students. *Chinese Journal of Clinical Psychology* 16(3),258-260.



- Wang, J., Kelly, B. C., Liu, T., Zhang, G., & Hao, W. (2013). Factorial structure of the Brief Symptom Inventory (BSI)-18 among Chinese drug users. *Drug and alcohol dependence, 133*(2), 368-375.
- Wang, C. C. D., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology, 53*(4), 422.
- Wang, X. (2009). *Maternal education, maternal language acculturation, parental involvement, and maternal social support as predictors of the academic achievement and socioemotional development of Asian American children.*
- Ward, C. A., Bochner, S., & Furnham, A. (2001). *The psychology of culture shock.* Psychology Press.
- Ward, C., & Geeraert, N. (2016). Advancing acculturation theory and research: The acculturation process in its ecological context. *Current Opinion in Psychology, 8*, 98-104.
- Ward, C., & Kennedy, A. (1993). Psychological and Socio - cultural Adjustment during Cross - cultural Transitions: A Comparison of Secondary Students Overseas and at Home. *International Journal of Psychology, 28*(2), 129-147.
- Ward, C., & Rana-Deuba, A. (1999). Acculturation and adaptation revisited. *Journal of cross-cultural psychology, 30*(4), 422-442.
- Watson, J., & Nesdale, D. (2012). Rejection sensitivity, social withdrawal, and loneliness in young adults. *Journal of Applied Social Psychology, 42*(8), 1984-2005.
- Wheeler, W. R., King, H. H., & Davidson, A. B. (1925). *The foreign student in America: A Study by the commission on Survey of Foreign Students in the United States of America.* Young Men's Christian Association and the Young Women's Christian Association. New York: Association Press.
- Williams, K. D. (2007). *Ostracism.* *Psychology, 58*(1), 425.

## References

- Winkelman, M. (1994). Cultural shock and adaptation. *Journal of Counseling and Development: JCD*, 73(2), 121.
- Woerner, J., Kopetz, C., Lechner, W. V., & Lejuez, C. (2016). History of abuse and risky sex among substance users: The role of rejection sensitivity and the need to belong. *Addictive Behaviors*.
- Wolfgramm, C., Morf, C. C., & Hannover, B. (2014). Ethnically based rejection sensitivity and academic achievement: The danger of retracting into one's heritage culture. *European Journal of Social Psychology*, 44(4), 313-326.
- Xia, P., Li, N., Hau, K. T., Liu, C., & Lu, Y. (2012). Quality of life of Chinese urban community residents: a psychometric study of the mainland Chinese version of the WHOQOL-BREF. *BMC medical research methodology*, 12(1), 1.
- Yan, W. H. (2007). A research on the adjustment, stressor and strain of Chinese students and academics in Germany. *Psychological Science*, 30(4), 1010-1012.
- Yang, M., (2012). *Eine Analysen über interkulturelle Kompetenz unter chinesischen Studenten in Deutschland* (Master thesis, Huazhong University of Science and Technology).
- Ying, Y. W. (2005). Variation in acculturative stressors over time: A study of Taiwanese students in the United States. *International Journal of Intercultural Relations*, 29(1), 59-71.
- Yoon, E., Chang, C. T., Kim, S., Clawson, A., Cleary, S. E., Hansen, M., ... & Gomes, A. M. (2013). A meta-analysis of acculturation/enculturation and mental health. *Journal of counseling psychology*, 60(1), 15.
- Yu, W., & Wang, S. (2011). An investigation into the acculturation strategies of Chinese students in Germany. *Intercultural Communication Studies*, 20(2), 190.
- Yu, Chen, Li, Liu, Jacques-Tiura, & Yan. (2014). Acculturative stress and influential factors among international students in China: A structural dynamic perspective. *PloS one*, 9(4), e96322.

- Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-efficacy, stress, and academic success in college. *Research in higher education*, 46(6), 677-706.
- Zanarini, M. C., Frankenburg, F. R., Sickel, A.E., & Yong, L. (1996). *The Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV)*. McLean Hospital, Belmont, MA.
- Zanarini, M. C., Vujanovic, A. A., Parachini, E. A., Boulanger, J. L., Frankenburg, F. R., & Hennen, J. (2003). A screening measure for BPD: The McLean screening instrument for borderline personality disorder (MSI-BPD). *Journal of Personality Disorders*, 17(6), 568-573.
- Zhang, W. Y., Guo, T. W., GUO, Zh., Ma, W. H., Ma, X. H., Yang, X. Q., Hu, L. J., Chen, J., Yang, X. J., & Tu, Y. (2015). Relation of depressive status and life quality to personality traits in college students. *Chinese Mental Health Journal* 29(8), 635-640.
- Zhang, D. (2015). *The situation of Chinese students in Germany: an intercultural perspective and study* (Vol. 30). Herbert Utz Verlag.
- Zhang, J., Mandl, H., & Wang, E. (2010). Personality, acculturation, and psychosocial adjustment of Chinese international students in Germany. *Psychological reports*, 107(2), 511-525.
- Zhang, J. X., & Schwarzer, R. (1995). Measuring optimistic self-beliefs: A Chinese adaptation of the General Self-Efficacy Scale. *Psychologia: An International Journal of Psychology in the Orient*, 38 (3), 174-181.
- Zhang, J., Wu, Z. Y., Fang, G., Li, J., Han, B. X., & Chen, Z. Y. (2010). Development of the Chinese age norms of CES-D in urban area. *Chinese Mental Health Journal*, 24(2), 139-143.
- Zhao, Q.R. (2010). *Eine Analyses über Kulturschock bei chinesischen Studenten in Deutschland* (Master thesis, Beijing Institute of Technology).
- Zhao, Y.L., Li, W.T., & Zhang L. (2012). Revision of rejection sensitivity questionnaire for Chinese college students. *China Journal of Health Psychology*, 20(11), 1677-1680.

## References

Zhong, J., & Leung, F. (2007). Should borderline personality disorder be included in the fourth edition of the Chinese classification of mental disorders? *Chinese Medical Journal-Beijing-English Edition*-, 120(1), 77.

Zhou, J. (2009). *Zwischen "Elite von morgen" und Liu-xue-laji ("Müllstudenten")*: *chinesische Studenten in Deutschland* (Doctoral dissertation, Münster (Westfalen), Univ., Diss., 2009).

Zhou, Y., Jindal-Snape, D., Topping, K., & Todman, J. (2008). Theoretical models of culture shock and adaptation in international students in higher education. *Studies in Higher Education*, 33(1), 63-75.

Zhu, J. (2012). *Academic adjustment of Chinese students at German universities* (Doctoral dissertation, Humboldt-Universität zu Berlin, Philosophische Fakultät IV).

Zimmermann, J., & Neyer, F. J. (2013). Do we become a different person when hitting the road? Personality development of sojourners. *Journal of personality and social psychology*, 105(3), 515.

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## Zusammenfassung

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Zurückweisungsempfindlichkeit (ZE) wird als dynamische Verarbeitung spezifischer Situationen verstanden, die potenzielle Zurückweisung mit sich bringen und in denen kognitive Reaktionen (d.h. Erwartung von Zurückweisung) und affektive Reaktionen (d.h. Angst vor Zurückweisung) aktiviert werden und miteinander interagieren. Individuen mit hoher Zurückweisungsempfindlichkeit zeichnen sich dadurch aus, dass sie die Gefahr von Zurückweisung ängstlich erwarten, leicht wahrnehmen und überreagieren und dadurch in einen Teufelskreis mit sich wiederholenden Erfahrungen von Zurückweisung, negativer interpersoneller Konsequenzen und einem negativen Wohlbefinden geraten. Aufgrund des Einflusses unterschiedlicher kultureller Muster nehmen wir an, dass es zwischen deutschen und chinesischen Individuen einen Unterschied in der Verarbeitung von Zurückweisung geben könnte.

Um den potenziellen kulturellen Unterschied bezüglich der Zurückweisungsempfindlichkeit zu untersuchen, liefert der erste Teil der vorliegenden Arbeit eine validierte Messung von Zurückweisungsempfindlichkeit (insgesamt N=617 Teilnehmer) mit interkultureller Äquivalenz zwischen China und Deutschland. Basierend auf den guten psychometrischen Eigenschaften der chinesischen Version des RSQ halten



wir den Fragebogen für ein vielversprechendes Messinstrument zur Erhebung von Zurückweisungsempfindlichkeit in China als auch bei Kulturvergleichen.

Kulturelle Unterschiede wurden zwischen chinesischen und deutschen nicht-klinischen Stichproben gefunden (jeweils 223 Teilnehmer für jedes Land). Einhergehend mit den Unterschieden in kulturellen Mustern des Ausdrucks von Zurückweisung und Einstellung gegenüber Unsicherheit zeigten chinesische Teilnehmer eine signifikant höhere Erwartung von Zurückweisung und signifikant niedrigere Angst vor Zurückweisung. Sie berichteten insgesamt niedrigere Zurückweisungsempfindlichkeit als die deutschen Teilnehmer. Studie 1 zeigt Zurückweisungsempfindlichkeit als universales Konstrukt mit kulturellen Variationen.

Um die Relevanz von Zurückweisungsempfindlichkeit für den Prozess der kulturellen Transition chinesischer Studierender in Deutschland zu bestimmen, untersuchte Studie 2 den Zusammenhang zwischen dem Wohlbefinden chinesischer Studierender in Deutschland und Variablen der individuellen Ebene einschließlich kultureller Anpassung, allgemeiner Selbstwirksamkeit und Zurückweisungsempfindlichkeit. Die Ergebnisse geben ein umfassendes Bild des Lebens von chinesischen Studierenden in Deutschland (n=119) und bestätigten zum ersten Mal Zurückweisungsempfindlichkeit als einen signifikanten Prädiktor des Wohlbefindens und der kulturellen Anpassung. Weitere

## Zusammenfassung

Analysen ergaben, dass die Effekte von Zurückweisungsempfindlichkeit auf das Wohlbefinden durch allgemeine Selbstwirksamkeit und kulturelle Anpassung mediiert wurden. Allgemeine Selbstwirksamkeit und kulturelle Anpassung sind protektive Faktoren für das Wohlbefinden der chinesischen Studierenden in Deutschland. Zusätzlich liefert die vorliegende Arbeit Nachweise für das kognitiv-affektive Verarbeitungsmodell von Zurückweisungsempfindlichkeit mit unabhängigen Effekten von kognitiven und affektiven Aspekte der ZE. Die empirischen Daten unterstützen die theoretische Arbeit zu Zurückweisungsempfindlichkeit und rechtfertigen zukünftige Forschung.

Zusammenfassend wurde in der Dissertation versucht das Konstrukt Zurückweisungsempfindlichkeit in einem interkulturellen Raum zu verstehen und die Interaktion zwischen Zurückweisungsempfindlichkeit, kultureller Anpassung, allgemeiner Selbstwirksamkeit und Wohlbefinden weiter aufzuklären. Die Ergebnisse liefern einen Beitrag zu Zurückweisungsempfindlichkeit durch die Anpassung der Messung und eine Erweiterung des Forschungsfelds.

Zukünftige Forschung sollte darauf fokussieren, diese ersten Hinweise durch experimentelle und längsschnittliche Studien zu verifizieren. Zusätzlich sollte ein größeres Bewusstsein für psychische Gesundheit in der Population der studierenden Gäste gefördert werden.

## **Selbstständigkeitserklärung**

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Hiermit versichere ich, dass ich die vorgelegte Arbeit selbstständig verfasst habe und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt habe, sowie Zitate kenntlich gemacht habe.

Die Arbeit ist in keinem früheren Promotionsverfahren angenommen oder abgelehnt worden.

Berlin, den 20. Oktober 2016

Ruifang Jiang