Sabine Panzer-Krause / Anna Kosoburd

"Revenge Travelling" and COVID-19 – Reality or Myth? Empirical Findings from Students at a German University Regarding Their Travel Behavior

Abstract

During the COVID-19 pandemic, the tourism sector was sometimes completely shut down. However, the strict measures were relaxed in periods characterized by lower infection rates. In this context, "revenge travelling", an assumption that people would travel excessively to relieve their pandemic fatigue and compensate for missed holiday trips, was discussed amongst the tourism industry and media. This paper aims to unravel whether "revenge travelling" concerning COVID-19 is a reality or myth. It examines six indicators that constitute the phenomenon amongst students at a German university. Four out of the six indicators did not provide any proof of "revenge travelling" behavior. Tertiary students did not travel more frequently in 2021 than in 2020; they did not spend more on vacations, and COVID-19-related considerations did not change their travel planning.

Additionally, only a minority of the students who travelled more often linked this to compensating for missed vacations. Nonetheless, the indicators "travel durations" and "travel destinations" revealed some evidence of travel behavior associated with the phenomenon. In sum, this study argues that COVID-19-related "revenge travelling" is a myth rather than reality.

Keywords: revenge travelling, COVID-19, pandemic, travel behavior, tertiary students

1. Introduction

COVID-19 was declared a pandemic in March 2020 (World Health Organization [WHO], 2020), and to keep the spreading of the virus to a minimum, national governments introduced social distancing measures (Bae & Chang, 2020; Isaac & Keijzer, 2020; Zaman et al., 2021). As tourism led to high numbers of new infections, the industry was, at some periods, completely shut down (Bratić et al., 2021).

During the lockdowns and especially when the strict measures were eased, a debate about "revenge travelling" was raised within the tourism sector (Girish, 2021). "Revenge travelling" refers to a desire of tourists to travel extensively and thus make up for trips that had been cancelled or postponed due to virus containment measures (Shadel, 2020). However, little research has been undertaken concerning COVID-19-related "revenge travelling". Firstly, the concept is primarily based on assumptions and general observations (Enger et al., 2020; Kuo, 2020; Shadel, 2020; Choudhary & Manda, 2021). Secondly, scientific studies only show snapshots in which respondents articulate an increased desire to travel (Kim et al., 2022; Zaman et al., 2021). However, such studies fail to investigate actual changes in travel behavior concerning countries' (temporary) easing of virus containment measures (Matiza, 2022). Tertiary students represent a societal group with great interest in travelling that makes up around 23% of international arrivals and is thus assumed to be incredibly open for "revenge travelling" (WYSE Travel Confederation, 2018; Enger et al., 2020); however, their travel behavior has to date received remarkably little attention.

Sabine Panzer-Krause, PhD, Corresponding Author, Associate Professor, University of Hildesheim, Department of Geography, Hildesheim, Germany; ORCID ID: https://orcid.org/0000-0003-4145-3789; e-mail: panzerkr@uni-hildesheim.de

Anna Kosoburd, University of Hildesheim, Niedersachsen, Germany; e-mail: anna.kosoburd@web.de



Hence, this study aims to contribute to closing this research gap. For this purpose, the phenomenon's indicators are discussed and examined by conducting a standardized survey among students at the University of Hildesheim, Germany. Thus, the study intends to answer whether COVID-19-related "revenge travelling" can be statistically evidenced amongst tertiary students.

The paper proceeds as follows: Section 2 provides a theoretical background. In Section 3, the study's methodology is drafted, and research hypotheses are formulated. In Section 4, the results are presented. Section 5 discusses and concludes.

2. Theoretical background

In the past, crises such as the 9/11 terrorist attacks in the US (2001) or the global financial crisis (2008-2009) affected the tourism industry, caused by changes in tourists' travel behavior and led to a sudden decline in tourist arrivals worldwide or in certain regions (Yang & Nair, 2014). However, statistics show evidence that such behavioral changes did not persist long-term. Instead, Gössling et al. (2021) underline that although tourists react sensitively towards crises, over recent decades, the tourism system has recovered quickly after disruptions and global tourism development has been characterized by growth.

Concerning crisis-led temporary changes in tourists' travel behavior, analyzing risk and risk perception is highly relevant. A literature review by Yang and Nair (2014) concludes that tourists' decision-making is mainly based on their perceived risk rather than the actual risk. Accordingly, it can be stated that those tourists who perceive a higher risk tend to cancel or postpone trips, prefer safer alternative destinations or destinations close to their homes, travel by car instead of plane or cut travel expenditures (Bronner & de Hoog, 2011; Ulfarsson et al., 2015; Papatheodorou, 2010; Garg, 2015).

However, concerning the COVID-19 pandemic as a global health risk, this argument fails to consider riskrelated governmental regulations introduced to secure societal safety, as such regulations are independent of the individual's perception of risk. Compared to other crises, the COVID-19 pandemic had an unprecedented impact on the tourism industry as travel restrictions and travel bans were put into place in countries all over the world and brought it to a complete standstill at times (Bratić et al., 2021). Particularly in the first pandemic year of 2020, most tourists across the globe were forced to withdraw from or at least adapt their travel plans regardless of their risk perception. According to United Nations World Tourism Organization (UNWTO, 2020), international tourism worldwide decreased by -70% compared to 2019.

In contrast to the recovery process of the tourism industry after crises in the past, with the relaxation of COVID-19-related restrictions in the tourism sector, a discussion about "revenge travelling" arose. "Revenge travelling" draws on the concept of "revenge spending", which originated in the aftermath of the Cultural Revolution (1966-1976) in China. The Chinese population had been economically paralysed for a decade and could not purchase products from Western countries (Lins et al., 2021; Shadel, 2020; Zaman et al., 2021). "Revenge spending" as excessive consumerism was observed after the end of this era (Darshan & Krishnegowda, 2020) and similarly noticed again after the first period of COVID-19-related lockdowns in 2020 (Botez, 2021; Lins et al., 2021).

This is the basis on which the term "revenge travelling" was coined, associated with people's travel behavior. According to observations of practitioners in the US tourism industry, after the relaxation of COVID-19-related lockdowns, people seemed to travel more often, seemed to travel longer distances to their destinations and seemed to prefer to stay longer in those destinations, as well as being willing to spend more money on their holidays (King, 2021; Whitmore, 2021). However, this debate was fueled particularly by non-scientific observations and the media; only very few scholarly studies exist that generally deal with "revenge travelling" (Zaman et al., 2021; Kim et al., 2022; Choudhary & Manda, 2021).

A study by Zaman et al. (2021) investigates the relationship between pandemic fatigue and the future travelling behavior of 422 international expats in Pakistan utilizing structural equation modelling. The study's results show that the more expats suffered from pandemic fatigue, the greater the chance that they expressed a high desire to travel excessively after the end of COVID-19-related travel restrictions.

Similarly, Kim et al. (2022) studied potential compensatory travel behavior. In 19 semi-structured interviews with Koreans, the majority expressed the desire to compensate for a missed or cancelled holiday due to COVID-19 measures by undertaking more expensive and longer holiday journeys in the future. Kim et al. (2022) complemented these interviews with a quantitative survey covering 482 Koreans that was realized in June 2020. Again, the results show evidence that the COVID-19 pandemic negatively influences satisfaction with life, which fuels the desire to get away from everyday life. This, again, is related to the tendency of "revenge travelling".

In an explorative study, Choudhary and Manda (2021) analyze pandemic risks linked to "revenge travelling" and the need to avoid such travel behavior accordingly. They argue that "revenge travelling" is to be considered a consequence of easing pandemic-related restrictions. While people must be allowed to leave their homes and take a timeout from everyday pandemic life, this can be risky if they travel to locations in the early stages of a new pandemic wave.

Observations showed that holiday bookings increased after temporary relaxations of COVID-19-related lockdowns were observed in various countries such as China, the United States, India, the United Kingdom, and Germany (Kuo, 2020; Enger et al., 2020; Shadel, 2020; Choudhary & Manda, 2021; Redaktionsnetzwerk Deutschland [RND], 2021). However, Vogler (2022) assumes that neither catch-up travelling nor degrowth (referring to a decrease in travelling as hoped for by numerous sustainability scholars) will be a reality in the post-COVID-19 tourism era. Nevertheless, this is not backed up with empirical data. Thus, it is not clear whether tourists simply return to pre-COVID-19 travel behavior as suggested by Panzer-Krause (2022), investigating COVID-19-related tourism development in two destinations in Ireland and Germany, or if lockdowns provoke "revenge travelling" in the sense of travelling more frequently, travelling longer distances, staying longer in the destinations, and spending more money.

To the best of the authors' knowledge, so far, despite the rush of COVID-19-related publications in tourism research (Lončarić et al., 2022), no study exists that examines whether the phenomenon of "revenge travelling" according to these criteria exists or whether it is only a myth brought into the discussion by the travel industry and the media. This study aims to help fill this research gap by analyzing the travel behavior of tertiary students as a travel-intensive target group. It is assumed that tertiary students are amongst those who are the most susceptible to "revenge travelling".

3. Methods

This study is based on a quantitative approach to test whether the phenomenon of "revenge travelling" exists amongst tertiary students. For this purpose, the travel behavior of tertiary students at the University of Hildesheim, Germany, was analyzed both concerning the first pandemic year of 2020, which was strongly influenced by lockdowns and COVID-19-related health uncertainties and concerning the second pandemic year of 2021 in which many of the strict COVID-19 measures were relaxed. The following hypotheses are formulated following the criteria for "revenge travelling" discussed in Section 2 (Hypotheses 1-4) and supplemented by two further hypotheses taking on trip planning criteria and travel motives (Hypotheses 5-6). Thresholds are kept at a low level to detect even more minor signs of "revenge travelling":

H1: On average, tertiary students travelled more frequently in 2021 than in 2020 (at least +0.5 trips).

- An increase of +0.5 trips per student is justified because the lockdown-free period suitable for travelling was considerably more extended in 2021 than in 2020.
- H2: On average, in 2021, tertiary students travelled for longer in total vacation days than in 2020 (at least +2 days).
 - The threshold of +2 days is backed up by the argumentation that this study considers every trip made by tertiary students away from their usual environment with a minimum of one overnight stay as a holiday.
- H3: In the first pandemic year of 2020, Germany was the most popular travel destination, while in 2021, more tertiary students travelled to other countries, particularly to other European countries (at least +10%).
 - This argumentation can be justified on the grounds of the COVID-19 vaccination rollout worldwide in 2021 and a corresponding reduction in restrictions and perceived risks regarding travelling.
- H4: Tertiary student travelers spent more money on their main trip in 2021 than 2020 (at least +200 EUR).
 - This hypothesis is based on King's (2021) and Whitmore's (2021) assumption that money was saved during lockdown periods and that travelers' willingness to undertake more expensive vacations rose after the (temporary) end of COVID-19-related restrictions.
- H5: Corona-related considerations played a less significant role in booking trips in 2021 than 2020 (at least -5 %).
 - Here, the vaccination rollout and, thus, the relaxation of travel restrictions justify the threshold of -5 %. Tertiary students are considered to have a lower risk perception than other social groups.
- H6: The motives for tertiary students who travelled more frequently in 2021 than in 2020 mainly relate to the desire to catch up on missed trips (>50%).
 - A key aspect of revenge travelling is the clear positioning of tertiary student travelers towards a desire to undertake trips in 2021 to make up for trips that could not be taken a year earlier due to the COVID-19 pandemic.

The survey was realized in October and November 2021. It was distributed electronically amongst all 8,575 students enrolled at the university in the 2021/2022 winter term (Stiftung Universität Hildesheim, 2021). Six hundred ninety-seven responses were received. Additionally, a small part of the sample (n=30) was covered in face-to-face interviews using the same questionnaire. Hence, the overall sample consists of 727 respondents.

The questionnaire consisted of 35 primarily closed questions. Following the hypotheses, it included questions about travel frequencies, the total duration of all trips, the influence of corona-related considerations regarding entering the travel destination and returning to Germany, vacation destinations, and the overall expenditures for a journey. Data was collated for the years 2020 and 2021 respectively.

Regarding data analysis, besides descriptive statistics, a series of McNemar tests, Wilcoxon signed-rank tests and paired t-tests were performed to investigate whether the data of the two pandemic years of 2020 and 2021 differ significantly.

More than half of the survey respondents (63.4%) were between 20 and 24 years old. The proportions of those under 20 and those aged 25 to 29 were 14.6% and 16.0%, respectively. Just under 5% of the students surveyed were over 30, making up the most minor portion of the sample. The average age of the participants was 22.6. More than three-quarters of the survey participants (77,5%, 563 respondents) were female, and only one-fifth (20,1%, 146) were male. 2.4% of the respondents (18 persons) identified as diverse or did not specify their gender. This roughly represents the gender distribution of students at the University of Hildesheim (Stiftung Universität Hildesheim, 2021). According to the university's profile focusing on teacher training (Stiftung Universität Hildesheim, 2021), more than half of the respondents studied to become teachers (62%), while the rest were enrolled in other courses.

4. Results

4.1. Desire to travel

In the first pandemic year of 2020, nearly three-quarters of all the students surveyed went on a holiday trip that included at least one overnight stay (74 %). In 2021, 79% of the respondents travelled at least once. Consequently, 5% more tertiary students travelled in 2021 than in 2020. However, the mean number of trips realized was nearly identical in both years, with 1.57 visits in 2020 (N=695) and 1.67 trips in 2021 (N=685). A paired t-test confirmed no significant difference between the travel frequencies in 2020 and 2021, T (726) =1.761, p=0.079.

In addition, the total number of travel days of those who went on holiday was analyzed. While in the first pandemic year of 2020, tertiary student travelers spent an average of 15.2 days on holidays, the mean number of travel days of those who went on a holiday increased to 17.5 days in the second pandemic year of 2021. A paired t-test showed that tertiary students' travel durations increased dramatically from 2020 to 2021, T (455) =2.232, p=0.026 (Table 1, Table 2).

Travel frequencies and travel durations 2020 and 2021

	2020	2021
The mean number of trips (travel frequency)	1.57 (N=727)	1.67 (N=727)
Mean number of total travel days (travel duration)	15.2 (N=536)	17.5 (N=568)

Table 2 Paired t-tests for travel frequencies 2020 and 2021 (N=727) and travel durations 2020 and 2021 (N=456)

	mean	Т	df	р
Travel frequency 2020 – travel frequency 2021	0.099	1.761	726	0.079
Travel duration 2020 – travel duration 2021	2.037	2.232	455	0.026*

^{*} Results are statistically significant.

4.2. Travel destinations

In the survey, tertiary students' travel destinations were collated by country and then grouped into three groups: 1. Germany, 2. Europe, according to the UN Geoscheme (United Nations Statistics Division [UNSD], 2023) (excluding Germany) and 3. non-European countries / long-distance destinations (Table 3).

Travel destinations 2020 (N=535) and 2021 (N=572)

	2020 (%)	2021 (%)
Germany	74.8	67.8
Europe (excluding Germany)	44.9	51.9
Non-European countries / long-distance destinations	5.6	10.3

In the first pandemic year of 2020, nearly three-quarters of the tertiary student travelers under investigation undertook domestic trips within Germany (74.8%). Other European countries were also popular as travel destinations. Although uncertainties concerning COVID-19-related health risks mainly characterized the travel season of 2020, 44.9% of the students undertook trips to European countries other than Germany. Here, the most important destinations were the Netherlands (62 visits), Denmark (42 trips) and Austria (29 trips), which are all neighboring countries. This emphasizes the relevance of short-distance travel during the first year of the pandemic.

In contrast, only a tiny percentage of the trips realized were to non-European countries and long-distance destinations (5.6%). Most of these trips were to Turkey (12 trips), followed by the United States of America (3 visits), Thailand and Brazil (2 trips each). In the second pandemic year of 2021, only 67.8% of the students conducted domestic trips. Meanwhile, the percentage of tertiary students travelling to a destination outside Germany but within Europe increased to 51.9%. In 2021, the most relevant European travel destinations shifted to Italy (60 trips), Spain (56 visits) and Greece (45 trips), which are all located in the Mediterranean region. Non-European countries and long-distance destinations were selected as travel destinations for tertiary student travelers nearly twice as often as in the year before (10.3%). This was mainly due to increased trips to Turkey (45 visits). Other non-European countries and long-distance destinations to which tertiary students undertook trips in 2021 included, for example, the United Arab Emirates (3 visits), Egypt and South Korea (2 trips each).

Table 4
McNemar tests for travel destinations 2020 and 2021 (N=457)

	McNemar	р
Travel destination Germany 2020-2021 (N=457)	6,877	0.009*
Travel destination Europe (excluding Germany) 2020-2021 (N=457)	9,697	0.002*
Travel destination non-European countries / long-distance destinations 2020-2021	6,894	0.009*

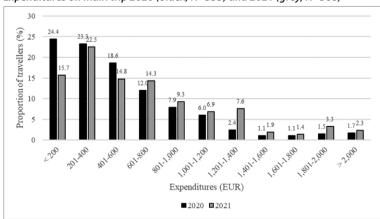
^{*} Results are statistically significant.

McNemar's tests for travel destinations in 2020 and 2021 show that the percentage of trips within Germany significantly decreased while the rate of trips to other European countries and non-European countries / long-distance destinations significantly increased (Table 4).

4.3. Expenditures

Furthermore, the data was examined concerning the costs of tertiary student travelers' main trips in 2020 and 2021, respectively. The expenditures analyzed included transport, accommodation, activities, and food (Figure 1).

Figure 1
Expenditures on main trip 2020 (black, N=533) and 2021 (grey, N=568)



Most tertiary student travelers spent up to 800 EUR on their main vacation in the two pandemic years. However, in 2020, 78.3% of the students had expenditures of up to this value, which was only valid for 67.3% in 2021, corresponding to a decrease of 11.0%. Within this group of expenditure categories, there is evidence of a substantial difference in the money spent on the main trip between the first and the second pandemic years in the category of "up to 200 EUR". In the first pandemic year, nearly one-quarter of the travelers (24.4%) spent 200 EUR or less. This proportion decreased by 8.7% to 15.7% one year later.

On the other hand, concerning all categories above 800 EUR, tertiary student travellers' expenditures were higher in 2021 than in 2020. This indicates that more expensive vacations were particularly realized in the second pandemic year. Here, the "1,201-1,400 EUR" category stands out as it is characterized by an increase of +5.2% from 2.4% in 2020 to 7.6% in 2021. Nonetheless, the median xmed for both years was the category "401-600 EUR". Thus, no significant overall change in travel expenditures could be demonstrated. However, a Wilcoxon signed-rank test showed evidence that although there was no median difference in the two years, the distribution functions, as described above, significantly differed regarding their position and shape (z=7.499, p=0.001*).

4.4. Influence of COVID-19-related considerations

The questionnaire stated possible COVID-19-related considerations that could have influenced tertiary students' travel plans. These included a low COVID-19 incidence rate, the travel destination not being a COVID-19 risk area and COVID-19-related entry regulations both at the travel destination and when returning to Germany (e.g. quarantine requirements, sufficient negative COVID-19 test evidence). The answer options were given utilizing a Likert scale ranging from "very strong" to "not at all" (Table 5).

Table 5 Influence of COVID-19-related considerations on travel plans 2020 and 2021

Covid-19-related considerations	Influence on travel plans	2020 (%)	2021 (%)
Low incidence rate	very strong	24.3	27.5
	rather strong	39.1	35.0
	partly	21.9	19.7
	rather weak	11.0	13.4
	not at all	3.7	4.4
Travel destination	powerful	61.2	58.2
should not be a risk area	rather strong	23.6	24.3
	partly	8.2	10.2
	rather weak	4.3	4.4
	not at all	2.6	2.9
Entry regulations at the	very strong	50.7	44.3
travel destination	rather strong	25.7	28.4
	partly	11.7	15.9
	rather weak	6.1	6.1
	not at all	5.9	5.4
Entry regulations when	are very strong	45.6	42.3
returning to Germany	rather strong	25.3	26.8
	partly	13.1	13.0
	rather weak	6.6	7.9
	not at all	9.4	10.1

The investigation demonstrates that for most tertiary student travelers, all four criteria listed strongly influenced vacation bookings in both the first and the second pandemic years. Yet, the most substantial influence was recorded concerning the criterion "Travel destination should not be a risk area". More than half of the respondents

for whom the criterion was relevant for their travel bookings indicated that it had a powerful influence in 2020 (61.2%) and 2021 (58.2%). Similarly, entry regulations at the travel destination significantly affected travel plans for half of the respondents (50.7%) in the first pandemic year. In 2021, this proportion decreased to 44.3%. The criterion "Entry regulations when returning to Germany" was also of relatively high importance amongst tertiary students in both years, as they indicated that it had a powerful impact on travel bookings in the first (45.6%) and in the second (42.3%) pandemic years. The "Low incidence rate" criterion played a less important role than the other three criteria. Most travelers rated the influence as "rather strong" (39.1% and 35.0% respectively).

Table 6 Wilcoxon signed-rank tests for COVID-19-related considerations 2020 and 2021

	Z	р
Low incidence rate 2020-2021	-0.730	0.466
Travel destination should not be a risk area 2020-2021	-2.388	0.017*
Entry regulations at the travel destination 2020-2021	-1.901	0.057
Entry regulations when returning to Germany 2020-2021	-2.529	0.011*

^{*} Results are statistically significant.

The changes between 2020 and 2021 are relatively small. With only one exception, they range between -4.1% and +4.2%. Only the evaluation "very strong" regarding the criterion "Entry regulations at the travel destination" decreased by -6.4% from 50.7% to 44.3% (Table 5). Wilcoxon signed-rank tests evidenced that for just two of the four criteria ("Travel destination should not be a risk area" and "Entry regulations when returning to Germany"), the median was significantly lower in the second pandemic year than in the first one (Table 6).

In sum, the results indicate that in both years, tertiary students were cautious concerning COVID-19-related health risks and travel restrictions when planning their vacations.

4.5. Motives for travelling more frequently.

Tertiary students who travelled more often in 2021 than 2020 were asked about their reasons for doing so. Here, respondents could select answers from several pre-defined motives in the questionnaire (Table 7).

Table 7 Number of mentions regarding motives for travelling more frequently in 2021 than in 2020 (N=332)

Motive	Mentions	Proportion (%)
COVID-19 status: vaccinated/recovered	259	25.5
Longing to get out and see something different (=having a break from the monotony of everyday COVID-19 life)	239	23.5
Significantly fewer restrictions than in the previous year	217	21.4
To feel freedom again	131	12.9
To catch up on missed trips	80	7.9
No longer considering the COVID-19 pandemic a danger	43	4.2
More money at the disposal	39	3.8
Vouchers from the previous year had to be redeemed	8	0.8
Total	1016	100.0

The most frequently given reason for increased travel was having been vaccinated against the COVID-19 virus or having recently recovered from COVID-19 and thus having the official status of temporary immunization (259 mentions). Furthermore, students travelled more frequently to get out and see something different (239 mentions). "Significantly fewer restrictions than in the previous year" was expressed 217 times as a reason to travel more often. To feel freedom again was mentioned 131 times as a reason for travelling more in the second pandemic year than in the first one. By contrast, only 80 responses related to the need to catch up on missed vacations. The criterion "No longer considering the COVID-19 pandemic a danger" was expressed 43 times by tertiary student travelers, and the motive "More money at disposal" was given relatively seldom (39 mentions). Merely eight responses indicated the need to redeem a travel voucher received for a planned but cancelled vacation in 2020.

Only 7.9%, and thus far from most of the responses, explicitly refer to the desire to catch up on missed trips, a motive associated with "revenge travelling". However, when the motives "Longing to get out and see something different (=having a break from the monotony of everyday life)" and "To feel freedom again" with 23.5% and 12.9% of all mentions are indirectly related to "revenge travelling", the overall proportion of mentions associated with the phenomenon of "revenge travelling" rises to 44.3%.

5. Discussion and conclusion

Based on a survey of 727 respondents among students at the University of Hildesheim, Germany, COVID-19-related tertiary student travel behavior was investigated to test whether the phenomenon of "revenge travelling" in the context of the COVID-19 pandemic exists. In the following, the hypotheses formulated in Section 3 are discussed, and a conclusion is drawn.

Hypothesis 1 stated that tertiary students travelled more frequently in the second pandemic year than they did in the first one. An increase of +0.5 trips per student was defined as the threshold to identify travel behavior associated with "revenge travelling". However, the analysis showed that the average number of journeys undertaken by tertiary students increased by only 0.1 visits in 2021 compared to 2020, even though the travel intensity increased from 74% in 2020 to 79% in 2021. Furthermore, a paired t-test demonstrated no significant difference regarding travel frequency between the two years. Hence, Hypothesis 1 is falsified.

Hypothesis 2 argued that with an increase of at least +2 days, tertiary student travelers stayed longer on holidays in 2021 than in 2020. The study results demonstrated an increase of +2.3 days between 2020 and 2021. A paired t-test confirmed statistical significance. Thus, Hypothesis 2 is verified.

Hypothesis 3 addressed the travel destinations and suggested that travelling domestically was more famous for the survey respondents in 2020 than travelling abroad, while in the second pandemic year, the proportion of students that travelled abroad was at least 10% higher than in the previous year. Even though the proportion of trips to European countries other than Germany only increased by +7.0%, Hypothesis 3 is verified since a significant rise in trips to non-European countries and long-distance destinations could be observed between 2020 and 2021 (+4.7%). McNemar tests provided proof that the data of the two years differ significantly.

Hypothesis 4 suggested that tertiary students spent at least 200 EUR more on their main vacation in the second pandemic year than in the first one. For both years, the median xmed was "401-601 EUR". Nevertheless, a Wilcoxon signed-rank test showed evidence that despite no median difference between the two years, the distribution functions significantly differed regarding their position and shape. Hence, even though Hypothesis 4 must be rejected, noticeable differences were identified in the expenditure categories "less than 200 EUR" and "1,201-1,400 EUR". While between 2020 and 2021, the proportion of expenditures up to 200 EUR decreased by -8.7%, it rose by +5.2% in the vacation costs category of 1,201-1,400 EUR.

Hypothesis 5 argued that the influence of COVID-19-related considerations concerning travel planning was at least -5% less relevant in 2021 than in 2020. Here, four COVID-19-related travel criteria were investigated. While respondents generally indicated that all four criteria greatly influenced their holiday booking behavior, the respondent's evaluation of the level of influence was relatively stable over the two years under investigation. Nevertheless, Wilcoxon signed-rank tests demonstrated that for two of the four criteria ("Travel destination should not be a risk area" and "Entry regulations when returning to Germany"), the median was significantly lower in the second pandemic year than in the first one. However, since differences were more minor than 5%, Hypothesis 5 is rejected.

Finally, Hypothesis 6 concerned the travel motives of those tertiary students who travelled more often in 2021 than in 2020. It asserted that the desire to catch up on missed trips was predominant, with more than 50% of all mentions. However, only 80 of 1016 mentions made by the respondents (7.9%) reflected this motive directly. Even when the motives "Longing to get out and see something different" and "Feeling freedom again" were additionally included as "revenge travel"-related motives, the cumulated proportion of mentions was less than 50%. Hence, Hypothesis 6 is rejected.

In sum, even though thresholds were kept at a low level, it can be concluded that four out of six indicators of "revenge travelling" behavior did not apply to tertiary students. Tertiary students were selected as the target group of this study as they are considered particularly open to travelling, insofar, as it was argued that potential "revenge travelling" behavior can be observed more obviously within this group than with any other group. Confirming Panzer-Krause's (2022) findings, this study argues that COVID-19-related "revenge travelling", mainly debated amongst tourism practitioners and the media, is more myth than reality. Even though some evidence of travel behavior associated with the phenomenon of "revenge travelling" was revealed concerning the indicators "travel durations" and "travel destinations", the phenomenon, including all six dimensions discussed in Section 2, could not be proven to exist.

Hence, although more extended periods of governmentally imposed lockdowns, including travel bans and travel restrictions, induce psychological stress in many individuals and can cause fatigue and frustration, compensating for missed holidays was not found to be a common recovery strategy. Insofar Yang and Nair's (2014) argument on risk in tourism is even a proper theoretical foundation for the analysis of tourism regarding crises that lead to travel restrictions and travel bans induced by national governments.

Regarding the study's limitations, it must be acknowledged that only data from a single university was considered. Also, due to the gender distribution amongst tertiary students at the University of Hildesheim, most of the survey's respondents were female. Thus, future research about "revenge travelling" could be more generalizable if a broader group of tertiary students or other demographic groups were included. Furthermore, to provide deeper insight into tourists' motivations and decision-making processes behind travel behavior changes, it may be helpful to implement a mixed-methods approach in future studies, including both qualitative and quantitative methods.

References

- Bae, S.Y., & Chang, P.-J. (2020). The effect of coronavirus disease-19 (COVID-19) risk perception on behavioural intention towards 'untact' tourism in South Korea during the first wave of the pandemic (March 2020). Current Issues in Tourism, 24(7), 1017-1035. https://doi.org/10.1080/13683500.2020.1798895
- Botez, L.L. (2021). The impact of pandemics on consumer purchasing of luxury and fashion: Lessons from history. OnResearch Journal, 6, 131-141.
- Bratić, M., Radivojević, A., Stojiljković, N., Simović, O., Juvan, E., Lesjak, M., & Podovšovnik, M. (2021). Should I stay or should I go? Tourists'COVID-19 risk perception and vacation behaviour shift. Sustainability, 13(6), Article 3573. https://doi.org/10.3390/su13063573
- Bronner, F., & de Hoog, R. (2011). Economizing behaviour during travel: Strategies and information sources used. Journal of Vacation Marketing, 17(3), 185-195. https://doi.org/10.1177/1356766711409180
- Choudhary, N., & Manda, V.K. (2021). Revenge travel or the road less traveled? Opting for a suitable option in pandemic times. International Journal of Advance and Innovative Research, 8(3), 37-45. https://doi.org/10.17605/OSF.IO/83BCG
- Darshan, S., & Krishnegowda, Y.T. (2020). The collision of pandemic Covid-19 on luxury market in India. Dogo Rangsang Research Journal, 10(7), 104-111.
- Enger, W., Saxon, S., Suo, P., & Yu, J. (2020, May 11). The way back: What the world can learn from China's travel restart after COVID-19. Travel, Logistics & Infrastructure. McKinsey & Company. https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/the-way-back-what-theworld-can-learn-from-chinas-travel-restart-after-covid-19



- Garg, A. (2015). Travel risk vs tourist decision making: A tourist perspective. International Journal of Hospitality & Tourism Systems, 8(1), 1-9. https://doi.org/10.21863/ijhts/2015.8.1.004
- Girish, V.G. (2021). COVID-19 pandemic and the emergence of revenge travel. International Journal of Tourism and Hospitality Research, 35(10), 125-129. https://doi.org/10.21298/IJTHR.2021.10.35.10.125
- Gössling, S., Scott, D., & Hall, M. (2021). Pandemics, tourism and global change: A rapid assessment of COVID-19. Journal of Sustainable Tourism, 29(1), 1-20. https://doi.org/10.1080/09669582.2020.1758708
- Isaac, R.K., & Keijzer, J. (2020). Leisure travel intention following a period of COVID-19 crisis: A case study of the Dutch market. International Journal of Tourism Cities, 7(3), 583-601. https://doi.org/10.1108/IJTC-08-2020-0158
- Kim, E.E.K., Seo, K., & Choi, Y. (2022). Compensatory travel post COVID-19: Cognitive and emotional effects of risk perception. Journal of Travel Research, 61(8), 1895-1909. https://doi.org/10.1177/00472375211048930
- King, R. (2021, October 9). Revenge travel and the rise of the mobile office. Fortune. https://fortune.com/2021/10/09/what-is-revenge-travel-pandemic-covid-delta-variant/
- Kuo, L. (2020, October 1). China promotes 'revenge travel' to boost economy after Covid lockdowns. The Guardian. https://www.theguardian.com/world/2020/oct/01/china-promotes-revenge-travel-boost-economy-coronavirusgolden-week
- Lins, S., Aquino, S., Costa, A.R., & Koch, R. (2021). From panic to revenge: Compensatory buying behaviours during the pandemic. International Journal of Social Psychiatry, 68(4), 921-922. https://doi.org/10.1177/00207640211002557
- Lončarić, D., Popović, P., & Kapeš, J. (2022). Impact on the COVID-19 pandemic on tourism: A systematic literature review. Tourism: An International Interdisciplinary Journal, 70(3), 512-526. https://doi.org/10.37741/t.70.3.12
- Matiza, T. (2022). Post-COVID-19 crisis travel behaviour: Towards mitigating the effects of perceived risk. Journal of Tourism Futures, 8(1), 99-108. https://doi.org/10.1108/JTF-04-2020-0063
- Panzer-Krause, S. (2022). Rural tourism in and after the COVID-19 era: Revenge travel or chance for a degrowth-oriented restart? An Irish and German perspective. Tourism & Hospitality, 3(2), 399-415. https://doi.org/10.3390/tourhosp3020026
- Papatheodorou, A. (2010). Global economic crisis and tourism: Consequences and perspectives. Journal of Travel Research, 49(1), 39-45. https://doi.org/10.1177/0047287509355327
- Redaktionsnetzwerk Deutschland. (2021, March 9). Ansturm auf britische Reiseportale: Auch deutsche Veranstalter erwarten Nachholeffekt [Run on British travel portals: German operators are expecting a catch-up effect, too]. https://www.rnd.de/reise/urlaub-nach-lockdown-ansturm-auf-britische-reiseportale-deutsche-veranstaltererwarten-nachholeffekt-UDD7TCGMABGFZPFETTMEXH5LJ4.html
- Shadel, J.D. (2020). 'Revenge travel' is the phenomenon that could bring back tourism with a bang. The Washington Post. https://www.washingtonpost.com/travel/2020/07/29/revenge-travel-is-phenomenon-that-could-bring-backtourism-with-bang/
- Stiftung Universität Hildesheim. (2021). Facts & figures. https://www.uni-hildesheim.de/en/profile/facts-figures/
- Ulfarsson, G.F., Steinbrenner, A., Valsson, T., & Kim, S. (2015). Urban household travel behaviour in a time of economic crisis: Changes in trip making and transit importance. Journal of Transport Geography, 49, 68-75. https://doi.org/10.1016/j.jtrangeo.2015.10.012
- United Nations Statistics Division. (2023). Geographic regions. https://unstats.un.org/unsd/methodology/m49/
- United Nations World Tourism Organization. (2020). UNWTO world tourism barometer May 2020: Special focus on the impact of COVID-19 (Summary). https://doi.org/10.18111/9789284421817
- Vogler, R. (2022). Revenge and catch-up travel or degrowth? Debating tourism post COVID-19. Annals of Tourism Research, 93, Article 103272. https://doi.org/10.1016/j.annals.2021.103272
- Whitmore, G. (2021, June 22). Revenge travel and where Americans are traveling. Forbes. https://www.forbes.com/sites/geoffwhitmore/2021/06/22/revenge-travel-and-where-americans-aretraveling/?sh=71a763b76339



- World Health Organization. (2020, March 11). WHO Director-General's opening remarks at the media briefing on COVID-19 11 March 2020. https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020
- WYSE Travel Confederation. (2018). New horizons IV: A global study of the youth and student traveller. WYSE Travel Confederation. https://www.wysetc.org/research/reports/new-horizons-iv/
- Yang, W.C.L., & Nair, V. (2014). Tourism at risk. A review of risk and perceived risk in tourism. *Asia-Pacific Journal of Innovation in Hospitality and Tourism*, *3*(2), 239-259. https://doi.org/10.7603/s40930-014-0013-z
- Zaman, U., Raza, S.H., Abbasi, S., Aktan, M., & Farías, P. (2021). Sustainable or a butterfly effect in global tourism? Nexus of pandemic fatigue, COVID-19-branded destination safety, travel stimulus incentives, and post-pandemic revenge travel. *Sustainability*, *13*(22), Article 12834. https://doi.org/10.3390/su132212834

Submitted: February 26, 2023 Revised: December 29, 2023 Accepted: January 22, 2024