

Chapter #8

THE FEAR OF CORONAVIRUS-19, EMIGRATION INTENTIONS AND ADOLESCENT ALCOHOL CONSUMPTION

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ABSTRACT

The aims of this study were to investigate (i) the relationship between pre-departure alcohol consumption and post-pandemic emigration intentions to study abroad among Slovak adolescents, (ii) the internal mechanism of the associations between the fear of Coronavirus-19 and the pre-departure health indicators related to the Coronavirus-19 pandemic measures in adolescents (emigration intentions and alcohol consumption). A cross-sectional survey design was used. A paper and pencil and online survey were carried out between October and November 2021 on a total sample of 296 adolescents from the eastern part of Slovakia (50.7% girls, M= 17.7 years). A higher level of post-pandemic study abroad intention was found among girls and adolescents who reported alcohol consumption. The data supported a long-way serial mediation (fear of Coronavirus-19 → self-efficacy → negative affect → emigration intentions → alcohol consumption). A direct negative effect of the fear of Coronavirus-19 on alcohol consumption was confirmed. This study contributes to the understanding of the pre-departure migration – health indicators relationship. Innovative school-based prevention programs would benefit from such knowledge and should incorporate supporting general self-efficacy, health-related behaviour and a healthy openness to new experience among adolescents before they leave their home countries.

Keywords: emigration intentions, alcohol consumption, adolescents, Coronavirus-19.

1. INTRODUCTION

Individuals vary in the extent to which they are able to withstand the Coronavirus-19 post/pandemic period of life and how they perceive their future prospects (Simon, Schwartz, & Hudson, 2021). The Coronavirus-19 pandemic disrupted the normal day-to-day life of adolescents and affected their health behaviors in complex ways (O'Rourke et al., 2022). Therefore, adolescents' alcohol and other drug use norms and alcohol and other drug use should be explored as part of a comprehensive innovative preventive approach including the collection of pre-migration data (Salas-Wright & Schwartz, 2019).

A literature-based review showed that young people show high motivation to migrate (Șerban-Oprescu et al., 2021). It also showed that higher education increases this interest as well as the influence of socio-psychological factors (family, challenges, opportunities, employment conditions, quality of life, desire for change, social environment, degree of development of society, individual freedom, values, traditions, etc.) (Șerban-Oprescu et al.,

2021). In terms of the post-Covid world, “migration remains a first-hand phenomenon to be on focus of research” (Xhelili, Ollogu, Sulejmani, & Aliu, 2022, p. 287).

Young people aged 15 to 29 in the V4 countries (Poland, Czech Republic, Hungary, Slovakia) reported a fundamental dissatisfaction with the quality of education. A quarter (26.8%) of young people in the V4 countries could not imagine migrating for more than six months while 23% reported a strong / very strong desire to migrate with 26% likely to do so within the next two years (Harring, Lamby, Bíró-Nagy, & Szabó, 2022). Slovak young people (19%) reported a strong / very strong desire to migrate, and one-third (33.3%) would like to do so within the next two years (Harring et al., 2022). Indeed, “Slovakia is third in the OECD in terms of the number of young people leaving to study abroad” (Bleha & Sprocha, 2020, p. 151). The interest of the most successful Slovak graduates to study at foreign universities has been increasing for a long time (Martinák & Varsik, 2020).

In general, Slovak emigrants can be described as “...mostly young and educated” (Machlica, Toman, Haluš, & Martinák, 2017, p. 27) and emigration intentions have been associated with a lack of sufficient business activities and economic development of some of the Slovak regions (Přivara, 2021). Slovakia is a country which has faced a significant brain-drain and outflow of qualified workers abroad (Grenčíková, Skačkauskienė, & Španková, 2018). Graduates, and especially those from the areas that generally suffer from unemployment, have migrated to more economically developed parts of Slovakia or abroad (Svabova & Kramarova, 2022). An additional important factor can be seen in the significant impact of the Coronavirus-19 pandemic on the development of unemployment in the Slovak Republic (Svabova, Metzker, & Pisula, 2020, Svabova, Tesarova, Durica, & Strakova, 2021).

Grounded in: (i) Migration Change Model (Tabor & Milfont, 2011) and Zimmerman et al.’s migration-health framework (Zimmerman, Kiss, & Hossain, 2011), we examine adolescents’ pre-departure migration-health indicators (emigration intentions and alcohol consumption) related to the fear of Coronavirus-19. Emigration intentions have been conceptualized in terms of frequency with which individuals had thought about working or living in another country for the reasons of education, better job prospects, setting up a business, working and living in another country for an extended period of time or emigrating to another country to live there permanently (Chan-Hoong & Soon, 2011). E/migration can be described as a process that begins well before one leaves their home country and the examination of these pre-departure experiences are important for understanding the context of migration (Tabor & Milfont, 2011). There are certain pre-departure health indicators which affect young people long after arriving at their destination (Gushulak & MacPherson, 2011). It was found that Coronavirus-19 pandemic stressors contributed to negative mental health outcomes such as distress, anxiety, infection fear/worry, traumatic stress, depression in addition to substance use and alcohol consumption among adolescents (Boden et al., 2021, Chretien, Minegishi, Cox, & Weitzman, 2022). The frequency of alcohol use, occurrence of depressive and anxious symptoms, and general levels of fear and concerns regarding the impact of Covid-19 on their lives have increased (Samji et al., 2022, Dumas, Ellis, & Litt, 2020). Indeed, the current rates of alcohol consumption among adolescents have likely been affected by the Covid-19 pandemic (Dumas et al., 2020, Hviid, Pisinger, Hoffman, Rosing, & Tolstrup, 2022, Rogés et al, 2021, Pelham III et al., 2021). However, the results of the systematic review on trends of alcohol consumption temporally associated with the Coronavirus-19 lockdowns showed that most samples were drawn from either the general population (e.g. social media users), university students, or regular drinkers, and the majority of the studies found that alcohol consumption prevalence increased during lockdown (Martellucci,

Martellucci, Flacco, & Manzoli, 2021). (ii) Health belief model in the context of the Coronavirus-19 pandemic (Walrave, Waeterloos, & Ponnet, 2020), we tested the internal mechanism (self-efficacy, negative emotions) of the associations between the fear of Coronavirus-19 and the pre-departure migration-health indicators related to the Coronavirus-19 pandemic (emigration intentions and alcohol consumption) among adolescents. Self-efficacy beliefs regulate human functioning, affect how people think and feel as well as making a difference in the quality of individuals' emotional life and decision-making (Bandura, 2002; Luszczynska, Gutiérrez-Doña, & Schwarzer, 2005). General self-efficacy can be explained as the belief in an individual's competence in their effective dealing with a variety of demands or stressful situations, as a broad pattern of successful coping with life (Luszczynska et al., 2005; Schwarzer, Boehmer, Luszczynska, Mohamed, & Knoll, 2005). It has been found that a low sense of self-efficacy is associated with negative emotions (Luszczynska et al., 2005) and general self-efficacy may have played a crucial role in coping behaviors and mental health during the Coronavirus-19 pandemic (Zhou, Yue, Zhang, Shangguan, & Zhang, 2021). It is important to take into account that adolescents have fewer coping strategies for emergency situations and are more vulnerable to mental illness when compared to adults (Garnefski, Legerstee, Kraaij, van Den Kommer, & Teerds, 2002).

This study aimed to explore the serial mediation model and test the internal mechanism of the associations between the fear of Coronavirus-19 and the pre-departure migration-health indicators related to the Coronavirus-19 pandemic measures on adolescents (emigration intentions and alcohol consumption). A serial mediating role of self-efficacy and negative emotions was hypothesised in line with previous findings which have shown the association between self-efficacy and successful migratory adaptation (Bandura, 2002), a negative impact of the fear of Coronavirus-19 on general self-efficacy (Yenen & Çarkit, 2023), as well as findings that have indicated self-efficacy and subjective well-being as being important factors in coping with Covid-19 (Jian, Hu, Zong, & Tang, 2022; Wen et al., 2022; Burrai et al., 2021; Cattelino et al., 2021). The extended hypothesised serial mediating role of self-efficacy and negative emotions with emigration intentions is in line with previous findings that have shown the association between the Coronavirus-19 pandemic and alcohol consumption, as well as between emigration intentions and alcohol consumption (Marsiglia et al., 2021).

2. DESIGN

A cross-sectional questionnaire study.

3. OBJECTIVE

The aim of the study was to investigate (i) the relationship between pre-departure alcohol consumption and post-pandemic emigration intentions to study abroad among Slovak adolescents, (ii) to propose the serial mediation model and test the internal mechanism of the associations between the fear of Coronavirus-19 and the pre-departure migration-health indicators related to the Coronavirus-19 pandemic measures on adolescents (emigration intentions and alcohol consumption).

4. METHODS

4.1. Sample and Procedure

The data collection among secondary school students took place between October and November 2021. Due to the ongoing second wave of Coronavirus-19 and the tightened measures at the time of data collection, the ongoing data collection was no longer possible in the paper and pencil format and had to be carried out exclusively online. Eleven secondary schools that provide general secondary education and prepare students for further study at universities and other higher education institutions were invited to collaborate on data collection via email. Nine secondary schools accepted this proposal to collaborate. These schools were asked to distribute the information about the survey and the questionnaires among their students. The questionnaires were distributed in person (the first 4 schools) and a link to an online form of the questionnaire (other schools) to their third-year and fourth-year students through school websites, information systems, official Facebook pages or during online lessons. Filling in the questionnaire was completely voluntary and anonymous. In total, data from 321 students who provided informed consent were obtained. Respondents who provided missing data were excluded from further analyses. The final sample of the study consisted of 296 respondents (50.7% girls, $M = 17.7$ years). The protocol of this study was reviewed and approved by the Ethics Committee at the Faculty of Arts of P. J. Šafárik University.

4.2. Measures

Emigration intentions in the post Coronavirus-19 period or intentions to emigrate were measured on a 6-item scale (Chan-Hoong & Soon, 2011) which required respondents to rate the frequency with which they thought about working or living in another country for the following reasons: (1) overseas education, (2) better job prospects, (3) setting up a business, (4) working and living in another country for 3 months or less, (5) working and living in another country for more than 3 months, and (6) emigrating to another country to live there permanently. Each of these six measurements were scored on a 5-item Likert scale from 1 (*never*) to 5 (*all the time*). The total score was calculated by adding up each item score (ranging from 6 to 30). Cronbach's alpha was 0.920. A higher overall score indicated a greater desire to migrate. The single-item instrument (overseas education) and the composite measure on 'Intention to emigrate' were the variables of interest in the study.

The item "*Intention to study abroad*" was used to measure this construct. Within this measure respondents rated the frequency with which they think about studying abroad (Chang-Hoong & Soon, 2011). A 5-point Likert-type scale ranging from 1 (*never*) to 5 (*all the time*) was used. A higher score indicated a greater desire to study abroad.

A 30-day prevalence rate of alcohol consumption was assessed on a dichotomous level, "*have drunk or have not drunk alcohol in the past 30 days*" (Hibell, Guttormsson, & Ahlstrom, 2012).

A 7-item Fear of Covid-19 Scale (Ahorsu et al., 2020) was used. Adolescents indicated their level of agreement with the statements using a five-point Likert type scale. Answers included the following options: "*strongly disagree*", "*disagree*", "*neither agree nor disagree*", "*agree*", and "*strongly agree*". The minimum score possible for each question was 1 while the maximum was 5. The total score was calculated by adding up each item score (ranging from 7 to 35). The higher the score, the greater the fear of Covid-19. Cronbach's Alpha of the scale = 0.782.

Self-efficacy was measured using the General Self-Efficacy Scale (Slovak version Košč, Heftyová, Jerusalem, & Schwarzer, 1993). The scale assessed optimistic self-beliefs in coping with a variety of difficult demands in life with statements such as “*I can always manage to solve difficult problems if I try hard enough*”. Adolescents indicated their agreement with 10 statements using a 4-point Likert type scale. A higher sum score indicated higher general self-efficacy. The total score was calculated by adding up each item score (ranging from 0 to 30). Cronbach’s alpha for this scale was 0.893.

The emotional component of habitual subjective well-being was measured by the original Slovak adaptation of the Emotional Habitual Subjective Well-being Scale (Džuka & Dalbert, 2002). In this instrument, two separate scales measure frequency of experiencing four positive (*joy, happiness, pleasure and energy*) and six negative (*anger, shame, sadness, fear, guilt and pain*) emotions or physical states. Respondents are asked to indicate the frequency of experiencing the 10 emotions or physical states using a six-point scale (from 0 = *almost never* to 5 = *almost always*). Higher scores indicate a higher frequency of experiencing positive and negative emotions. The Cronbach’s alphas for the positive and negative emotions/physical states scales were 0.752 and 0.813 respectively.

As the initial version of the scale was in English, the first step was a backward translation and then into Slovak to verify if the translated items were similar to the original ones. A panel discussion was carried out to check the content validity of the scales.

4.3. Statistical Analyses

A Mann-Whitney U test was used to test for the differences between the independent groups (gender, alcohol consumption) in the measure of intending to study abroad levels. The correlations of the variables of interest were analysed using a Spearman’s correlation coefficient. As part of the mediation analysis, the dependent variable alcohol consumption was regressed on the independent variable fear of Coronavirus-19 through a chain of three serial mediators (M1, M2 and M3; i.e. self-efficacy, negative emotions, emigration intentions).

The serial mediation model was analysed using the *PROCESS* macro Model 6 for SPSS. The bias-corrected 95% confidence interval (CI) was calculated with 5000 samples by means of bootstrapping. If the value zero was not included in the 95% CI, it indicated that the mediating effect was significant. Statistical significance was defined as a two-tailed value of $p < .05$. The analyses of the serial mediation were controlled for the covariate gender. The multicollinearity was assessed using the variance inflation factor (VIF) test. The VIF as well as the tolerance values indicated no problems with multicollinearity as all values for the VIF were < 1.3 . The multicollinearity was explored in a logit model through the examination of correlation matrix (Table 1) and the estimation of the equivalent model in the linear regression and the collinearity diagnostics were specified (Midi, Sarkar, & Rana, 2010). It was found that tolerances for all independent variables were smaller than 1 and all the VIF values were < 1.3 . All analyses were carried out using SPSS 25.0.

5. RESULTS

5.1. Emigration Intention to Study Abroad

The average mean of intention to study abroad among the adolescents was 2.66, SD = 1.40. A Mann-Whitney U test revealed:

- (i) significant differences in the intention to study abroad between boys ($Md = 2$, $n = 130$) and girls ($Md = 3$, $n = 139$), $U = 11139.5$, $z = 3.39$, $p = .001$. Girls reported significantly higher levels of intention to study abroad.
- (ii) significant difference in the intention to study abroad levels of non-alcohol-users ($Md = 2$, $n = 87$) and alcohol-users ($Md = 3$, $n = 183$), $U = 9995.5$, $z = 3.48$, $p = .001$. Alcohol-users reported significantly higher levels of intention to study abroad.

5.2. The Serial Mediation Analysis

The means, standard deviations, correlations and descriptive statistics for alcohol consumption and other measures are shown in Table 1. Overall, the adolescents reported an under-average level of fear of Coronavirus-19 as well as emigration intentions. 68.60% of adolescents reported alcohol consumption. The correlation analysis revealed that the fear of Coronavirus-19 was negatively correlated with self-efficacy and positive emotions, and positively correlated with negative emotions and alcohol consumption. Alcohol consumption was positively correlated with emigration intentions.

The data supported the serial mediation hypothesis (Table 2, Figure 1) and the long-way specific indirect effect of the fear of Coronavirus-19 → self-efficacy → negative affect → emigration intentions → alcohol consumption was statistically significant (effect: .0010; 95 % CI: .0001 to .0029). It means that those who felt a greater fear of Coronavirus-19 in turn reported a lower level of self-efficacy and higher frequency of experiencing negative emotions. This higher frequency of experiencing negative emotions was translated to a higher rate of the frequency with which they thought of working or living in another country, and finally to the likelihood that adolescents would report alcohol consumption.

Only one of shortcut specific indirect effects fear of Coronavirus-19 → self-efficacy → emigration intentions → alcohol consumption was statistically significant (effect: -.0030; 95 % CI: -.0081 to -.0003). The direct negative effect of the fear of Coronavirus-19 on alcohol consumption was confirmed (effect: -.070, $p < 0.05$). Adolescents who reported alcohol consumption reported lower scores on the fear of Covid-19 scale in this study.

Table 1.
Means, standard deviations, correlations and descriptives for alcohol consumption.

	1	2	3	4	5	6	M	SD
1 Fear of Coronavirus-19	1						12.85	4.09
2 Self-efficacy	-.203**	1					19.36	5.56
3 Negative affect	.147*	-.362***	1				12.42	5.55
4 Positive affect	-.134*	.331***	-.313***	1			11.32	3.49
5 Emigration intentions	-.078	.138*	.156*	-.056	1		16.10	7.11
6 Alcohol consumption	-.131*	-.04	-.016	.069	.168**	1	No n=93 31,80%	Yes n=199 68,20%

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

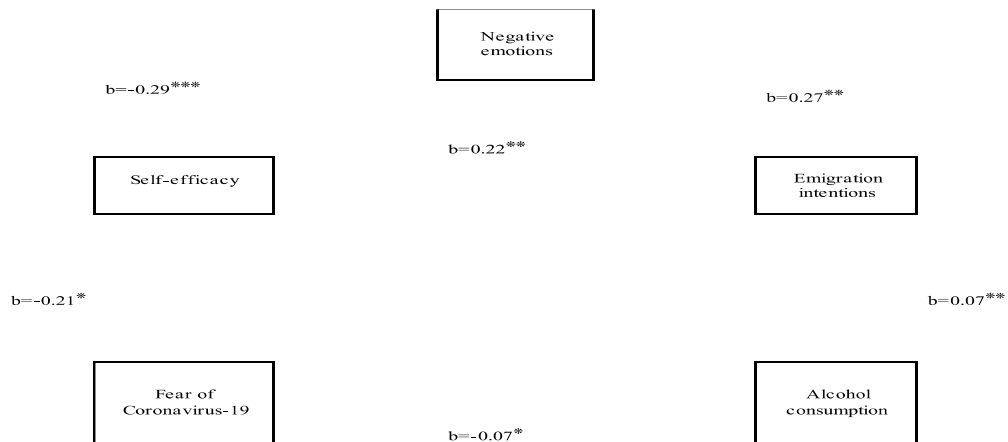
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Table 2.
Regression coefficients, Standard Errors, and Model Summary information.

Antecedent	Consequent											
	M1 (General self-efficacy)			M2 (Negative emotions)			M3 (Emigration intentions)			Y (alcohol consumption)		
	Coeff	SE	P	Coeff	SE	p	Coeff	SE	p	Coeff	SE	p
X (Fear of Coronavirus-19)												
	-.209	.085	.015	.111	.078	.153	-.095	.107	.374	-.070	.034	.042
M1 (General self-efficacy)	-	-	-	-.287	.056	<.001	.219	.081	.007	-.036	.028	.198
M2 (Negative emotions)	-	-	-	-	-	-	.268	.086	.002	-.039	.029	.181
M3 (Emigration intentions)	-	-	-	-	-	-	-	-	-	.065	.022	.003
Constant	22.61	1.17	<.001	14.842	1.648	<.001	9.438	2.588	<.001	1.544	.881	.080
	$R^2 = 0.036$			$R^2 = 0.205$			$R^2 = 0.057$			$R^2 = 0.096$		
	$F(2, 255) = 4.733, p < .010$			$F(3, 254) = 21.891, p < .001$			$F(4, 253) = 3.831, p < .01$			Model Summary: -2LL 304.346, ModelLL 18.269, df 5, $p = .003$		

Note: gender was a controlled variable

Figure 1.
Serial mediation model.



Notes: a full line = only significant effects were stated, gender was a controlled variable, * $p < .05$, ** $p < .01$, *** $p < .001$

6. DISCUSSION AND CONCLUSIONS

The importance of the role of gender in the context of migration intentions and aspirations has been confirmed (Marsiglia et al., 2021). The results of this study showed that girls had higher levels of intention to study abroad. The results of this study further support the pre-pandemic findings of emigration intentions among Slovak adolescents. Girls scored higher in the push factor of education as well as other explored push factors such as relationships, career and finance, language competencies, and experiences compared to boys (Hajduch, 2020).

A better understanding of pre-migration substance uses patterns such as the use of alcohol or tobacco could provide an important research background to the migration process (Salas-Wright et al., 2020; Lee, Martins, & Lee, 2015; Almeida, Johnson, Matsumoto, & Godette, 2012). A higher level of post-pandemic study abroad intention was found among girls and adolescents who reported alcohol consumption. This finding is consistent with previous research which found that students intending to study abroad drank more than students with no intention to study abroad, and that pre-departure drinking levels were identified as one of the most important predictors of drinking while abroad (Pedersen, LaBrie, Hummer, Larimer, & Lee, 2010).

This study also contributed to the understanding of the relationship between self-efficacy and the well-being of adolescents (Schunk & Meece, 2006; Pajares, 2006) in terms of the fear of Coronavirus-19. Firstly, the results showed a negative association between the fear of Coronavirus-19 and general self-efficacy, which is in line with previous research (Yenen & Çarkit, 2023; Okan, 2021). These results can be interpreted in the way that adolescents who showed a greater fear of Coronavirus-19 reported a lower level of optimistic self-belief in coping with a variety of difficult demands in life.

Secondly, self-efficacy was found to be a simple mediator in the relationship between the fear of Coronavirus-19 and emigration intentions. It was also found that self-efficacy and negative emotions were serial mediators between the fear of Coronavirus-19 and emigration intentions. These findings support previously confirmed connections between self-efficacy in regulating negative emotions and between high self-efficacy and the likelihood that individuals prefer more challenging tasks and more demanding goals (Cattellino et al., 2021; Cramm, Strating, Roebroek, & Nieboer, 2013). However, based on the results of this study, negative emotions were not a simple mediator of the relationship between the fear of Coronavirus-19 and emigration intentions. It means that the fear of Coronavirus-19 is not directly associated with the negative emotional component of subjective well-being but through the first serial mediator (general self-efficacy). Negative emotions are positively associated with post-pandemic emigration intentions.

Finally, the direct negative effect of the fear of Coronavirus-19 on alcohol consumption has been confirmed although this result was not fully consistent with previous findings. The study aimed to evaluate changes in early adolescent substance use (mean age = 12.4 years) during the 2019 pandemic and found that neither engagement in social distancing nor adolescents' worry about the virus itself (i.e., infection) was associated with youth substance use. However, young people's general anxiety and stress were strongly associated with it, meaning that the emotional impact of the pandemic was broader than just worry about getting ill (Pelham III et al., 2021). Another study however found that adolescents who were more depressed, anxious, and fearful for their safety due to the Coronavirus-19 pandemic could have engaged in solitary substance use as a form of coping (Dumas et al., 2020), and were more likely to report problematic alcohol use (Sharma et al., 2022).

In the face of the Coronavirus-19 pandemic and serial mediation results of this study, it can be anticipated that resilience interventions to foster general self-efficacy and well-being of adolescents, as protective factors (Schwarzer & Luszczynska, 2006), will be needed to promote the health of young populations prior to departure.

It is important to mention the limitations of this study such as the self-reported nature of collected data. Moreover, the sample size was not very large and the study used a combination of paper and pencil and online data collection methods due to the pandemic restrictions. On the other hand, web-based surveys have been identified as cost-efficient and could be applied without the various disadvantages of paper and pencil assessments (Zeiler et al., 2020). Furthermore, other research studies concerned with the quality of indicators and risk behaviour prevalence through paper and pencil and computerized surveys administered in schools have shown similar results (Colasante et al., 2019).

The results of this study support the hypothesis of self-selection of young people likely to use alcohol into a pre-migrant group (Borges et al., 2011) and contribute to previous findings focused on migration intentions and alcohol use (Marsiglia et al., 2021) by improving the understanding of pre-departure migration – health associations (Gushulak & MacPherson, 2011). However, the cross-sectional nature of this investigation has limited this understanding and suggested that longitudinal studies are needed for this objective.

Innovative school-based prevention programs would benefit from such knowledge and should incorporate supporting general self-efficacy, health-related behaviour and a healthy openness to new experience among adolescents before they leave their home countries.

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