

RESEARCH ARTICLE

The impact of discrimination on the psychological wellbeing and ethnic identity of international students in North Cyprus

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ABSTRACT

The social categorization theory suggests that ingroup bias is a common cognitive bias that can result in discrimination against outgroup members. In recent years there has been a notable increase in the international student body globally as well as an increase in the diversity of the students. Considering this background, it is imperative to investigate the social experiences of this group of students. The current research investigates experiences of discrimination among international students and how they influence their ethnic identity and psychological well-being. A sample of 386 students was recruited from 2 universities in Northern Cyprus using a convenience sampling technique. The findings show a positive relationship between discrimination and psychological distress. The findings also show that ethnic identity is negatively correlated with discrimination and psychological distress. International students who reported higher scores of discrimination showed higher levels of stress and depression. This is because discrimination would result in social exclusion or isolation. High levels of discrimination are associated with low ethnic identity scores among international students. The study shows that ethnic identity does not mediate the impact of discrimination on psychological well-being (psychological distress, depression, anxiety, stress). The findings also show that there are significant differences in discrimination based on race and religion this may be linked to cultural distance between the host and home countries. Considering these findings, educational institutions should increase support services offered to international students, offer awareness and sensitivity training for multicultural interactions and, also incorporate authentic sustainability curricula.

Keywords: discrimination; ethnic identity; emotional states; psychological wellbeing; inequality

1. Introduction

The foundation of modern societies is based on the equality principle^[1]. Equality and discrimination are inseparable concepts. Despite the equality of human beings is held as a human right by the United Nations, discrimination is still a problem in contemporary society and is practiced in a variety of contexts^[1]. Discrimination is the treatment of individuals who are put in the same circumstances differently due to one or more traits, such as race, ethnicity, gender, (dis)ability, sexual orientation, or other category statuses^[2]. In the early phases of many modern civilizations, systematic racial and/or ethnic segregation was the fundamental cause of discrimination. This made it impossible for minority groups to apply for specific employment or reside in specified places^[2]. These legal discriminatory systems were mostly eliminated in the 1960s and 1970s

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largely due to the Universal Declaration of Human Rights introduced at the United Nations in 1948 and the civil rights movement in the United States which both played a significant role in promoting and protecting human rights around the world^[3]. Subtle expressions of discrimination continue to persist for many races and ethnicities in public places, discrimination persists in the criminal justice system, the educational system, and the labour market. Discrimination has been proven to be harmful, primarily to the targeted individuals^[3].

The social identity theory describes intergroup dynamics and social identity. To know how to interact effectively with others in the environment the individual engages in social categorization, a process in which the individual categorizes themselves and others into groups^[4]. In different contexts in the individual's life, they must assume the feelings, behaviors and cognitions determined by their membership in different social groups. This social identity also determines their relationships with other groups and influences how they interact with members of those groups^[5]. Allport^[6] contends that through social categorization individuals attribute positive qualities to ingroup members while the outgroup is perceived as homogenous, characterized by negative qualities^[7]. Stereotypes are assigned to groups to differentiate them. Stereotypes are generalizations about the personal qualities of a group, which can be attributed to certain political, social and economic circumstances^[8]. It should be noted that stereotypes are culture-specific and can change according to historical period. While stereotypes are efficient ways of distinguishing between individuals and knowing how to interact with them, overgeneralization is not good. The social identity theory states that the desire for positive social identity and group categorization are associated with intergroup prejudice, discrimination and conflict. This suggests that negative stereotypes about minority groups may be motivated by the desire of the majority group to maintain a positive social image by ascribing negative qualities to other groups^[4].

Discrimination in the school context may happen in almost every aspect of academic life, including teacher attitudes and expectations, institutional policies and behavior codes, application of discipline, grouping practices and selection, curriculum, instructional techniques, and educational resources^[9,10]. Discrimination can also be seen in experiences with law enforcement personnel at schools^[10]. Negative attitudes from instructors are associated with reduced student motivation and poor performance^[11]. Furthermore, the attitudes of educators have long-term effects on students' ideals and consequently the principles of society at large. Educators are required to be role models for students which necessitates authenticity on the part of the teacher^[12]. Authenticity in the tertiary education context can be defined as acting in the best interest of the students to help students develop their authenticity. Authenticity encompasses characteristics such as being responsible, reciprocal, prosocial rather than acting on self-interest, being compassionate, and ethical^[13]. Authenticity is how individuals are expected to contact themselves and interact with others, however, discrimination may impend the work of authenticity and environmental and human justice. The prevailing consumer ideology promotes greed, selfishness, possessiveness, moral relativism, vanity, and competition instead of cooperation^[14]. Students are often indoctrinated into neoliberalism ideologies throughout education such that it becomes a shared ideology, existing outside conscious functioning^[15]. However, as the world moves towards the sustainable development goals sustainability must be built into the curriculum. An authentic sustainability curriculum teaches students to approach the world with a mindful conservation approach as opposed to consumerism. Sustainability primarily entails re-establishing interpersonal relations as well as human-nature interactions based on ethical considerations^[12]. This can alleviate the challenges of discrimination within the educational context and society.

International students may also face discrimination outside the academic context, in their interactions with the local community. Diverse manifestations of discrimination can be experienced owing to their ethnicity or nationality^[16]. Due to language challenges, cultural disparities, and a lack of familiarity with the local traditions and practices, these students frequently struggle with integrating into the community^[17]. Their sense of self, sense of belonging, and mental health can all be negatively impacted by the discrimination they encounter, resulting in anxiety, tension, and depression^[9]. Being exposed to a foreign cultural context might challenge international students' views and values, and as a result, cause them to frequently struggle to maintain their ethnic identity. Discrimination can make this problem worse by making them question their identity,

which causes them to experience perplexity, self-doubt, and a sense of alienation^[18]. It cannot be refuted that discrimination has an effect on ethnic identity. An individual's sense of ethnic identification, which is defined as belonging to a specific ethnic or racial group, is extremely important in determining one's self-identity, worldview, and values^[18]. Discrimination can negatively impact person's ethnic identity by instilling uncertainty, apprehension, and a sense of alienation from their cultural roots^[18]. The development of cultural and personal identity, achieving personal fulfilment, and maintaining good mental health are all related to psychological adaptation in a new cultural context^[19]. Every time two socially and culturally dissimilar groups come together, psychological, and behavioural changes are unavoidable.

According to the 2020 population estimates, there are about 150,000 foreign students in the Turkish Republic of Northern Cyprus. Students from various cultures. Typically, provocation or overt mischief are associated with discrimination. However, it doesn't always involve menacing or frightful behaviour. Racist remarks and jokes, as well as being excluded from events or gatherings because of their background can be considered to be discrimination. Additionally, it frequently appears in organizational frameworks^[20].

Discrimination through the years has been seen to have the potential to have significant negative effects on both individuals and communities^[21]. Discrimination may have a catastrophic effect on the lives of targets or victims. The victims might suffer from physical and psychological harm in addition to detrimental repercussions on their personal lives, finances, and social relationships. Discrimination impacts the general well-being of its victims as it often prevents them from having equitable access to services, employment, and education^[10]. International students have been seen to bring a diversity of perspectives, experiences, and cultures to the host country. Schools gain better reputations by recruiting international students and thus international students help to enhance the school's overall quality^[20]. International students potentially could become future entrepreneurs or business leaders and thus contribute to the economy of the host country^[20]. However, discrimination can harm a host country's reputation as a welcoming and inclusive place, which may deter future international students and negatively impact the country's economy.

Discrimination, especially racially motivated discrimination may undermine the targeted individual's identity and dignity by making them feel inferior and dehumanized^[21]. People who regularly face discrimination are known to change their behaviour and daily habits^[22]. Discrimination jeopardizes health and affects developmental paths. Discrimination has been linked to poorer self-esteem, increased stress, anxiety, depression, suicidal thoughts and attempts, violence, ADHD, and behavioural issues. The social world and other facets of society may also be affected by discrimination. The development of a society can be hampered by issues including fear of new environments or social groups, alienation from the group, loneliness, and lack of faith in other people. Discrimination can have a negative effect on a victim, their family, and the society, especially when leaders, neighbours, and authorities respond poorly. Discrimination may lead to communities breaking apart and severing relationships, which is normally bad for everyone including the victims and perpetrators^[23].

Studies have shown a link between discrimination and mental health problems^[21, 24–26]. This study explores how discrimination affects the ethnic identity and mental health of foreign students in North Cyprus. This study looks at the differences in level of discrimination faced based on gender, race, and religion. This study also explores how ethnic identity may affect the relationship between discrimination and psychological distress.

2. Methodology research design

The study employed a correlational research model to assess the relationship between discrimination, poor mental health qualities and ethnic identity. This study employed a quantitative research methodology.

2.1. Participant/Population and sample

This study's populace comprised of international understudies from various faculties in X university and Y university and a few other universities in North Cyprus. In order to conduct the study, a sample from this population was selected using a convenience sampling technique. Convenient sample design is a non-probability technique that includes choosing respondents based on their comfort, accessibility, and closeness to the researcher^[27]. 385 students will make up the study's sample, which is a suitable number for a population of any size.

2.2. Data collection tools/measures

A structured questionnaire was used in the course of the study. The questionnaire included a socio-demographic form as well as four standardized scales namely: Everyday Discrimination Scale (EDS), Kessler Psychological Distress Scale (K10), Depression, anxiety and Stress Scale (DASS-21) and Ethnic Identity Scale-Brief (EIS-B).

2.3. Socio-demographic form

The socio-demographic form includes questions, age, gender, race, level of study and religion.

2.3.1. Everyday Discrimination Scale (EDS)

The Everyday Discriminations Scale (EDS) which was developed by Williams et al.^[28]. It is a 9-item, Likert-type questionnaire with scores ranging from 0 (almost every day) to 6 (never). It is the most commonly used instruments for measuring discrimination in everyday life. The reliability was calculated to be 0.87 Cronbach Alpha^[28]. Questions from this scale assess the frequency of discrimination on a daily basis.

2.3.2. Kessler psychological distress scale (K10)

The Kessler Psychological Distress scale, which was developed by Kessler et al.^[29]. provides a way to measure psychological distress. There are ten emotional state-related questions on the K10 scale, each with a five-level response scale. The measure can be used as a brief screen to identify levels of distress. Each response is graded on a scale of 1 ("none of the time") to 5 ("all of the time"). The ten items' scores are then added up to produce a final score that can range between 10 and 50. High scores imply high levels of psychological distress, whereas low scores suggest low levels of psychological distress. Cronbach alpha reliability was calculated to be 0.88^[29].

2.3.3. Depression, anxiety and stress scale (DASS-21)

Lovibond and Lovibond^[30] created this self-report scale to measure the three disruptive emotional states: stress, anxiety, and depression. The 21 components of this scale are broken down into three subscales: stress, anxiety, and depression. Every subscale has seven components. DASS-21 is rated on a Likert scale with 4 options ranging from 0 (Did not apply to me at all) to 3 (Applied to me very much or most of the time). The respondent must state on the DASS21 if they have had the specified symptom during the past week. The Cronbach's alpha reliability values for the subscales are depression (0.87), anxiety (0.84), and 0.85 for stress^[30].

2.3.4. Ethnic identity scale-brief (EIS-B)

The Ethnic Identity Scale Brief (EIS-B) was adapted by Douglas and Umana-Taylor^[31] from the Ethnic Identity Scale by 24 Umaña-Taylor^[32]. The scale assesses the distinct components of ethnic-racial identity. The EIS-B has nine items with three subscales that look at three different aspects of how ethnic identity is formed: affirmation, exploration, and resolution. Existing findings support the validity and reliability of the EIS-B as a brief measure of the multidimensional construct of ethnic-racial identity and indicate that the EIS-B assesses ethnic-racial identity in a comparable manner to the original version of the scale^[31]. Items are scores on a 4-

point Likert scale, with endpoints of 1 (Does not describe me at all) to 4 (Describes me very well). The Cronbach’s alpha reliability value of the EIS-B is 0.89^[31].

3. Procedure

In order to commence the study, ethical approval was received from the Near East University Social Science Ethical Committee (application number NEU/SS/2023/1577). A pen-and-paper version of the structured questionnaire was then administered to the participants. With the lecturers’ approval, data were gathered during regular class hours as well in the campus cafeteria in X and Y and other places that students frequent for leisure activities. Participants consented to participate in this study after receiving an informed consent form attached to the questionnaire. the questionnaire took about 10 minutes to complete. In addition, participants were informed on the objectives of the study and assured that their comments would remain confidential. Participants were not compensated for their participation, as participation was entirely voluntary.

The data were examined using IBM version 22 of the statistical package for social sciences (SPSS). To determine if the data was regularly distributed or not, a normality test was carried out as this would help the researcher ascertain if a parametric or non-parametric test would be used. The Spearman correlation analysis tabulated in table 1 was used to determine the relationship between discrimination, ethnic identity and psychological wellbeing.

4. Results

The first table will address the relationship between discrimination, psychological distress, emotional states such as depression, anxiety and stress, ethnic identity, and age.

Table 1. Relationship between everyday discrimination, psychological distress, the emotional states of depression, anxiety and stress, ethnic identity subscales and age.

1	2	3	4	5	6	7	8	9	10
1 Discrimination	0.356** 0.000	0.391** 0.000	0.150** 0.003	0.140** 0.006	-0.262** 0.000	0.068 0.183	-0.132** 0.010	-0.132** 0.009	0.122* 0.017
2 Psychological distress		0.612** 0.000	0.566** 0.000	0.521** 0.000	-0.116* 0.022	0.058 0.253	-0.084 0.101	-0.060 0.237	-0.009 0.860
3 Depression			0.760** 0.000	0.798** 0.000	-0.308** 0.000	0.124* 0.015	-0.058 0.252	-0.070 0.171	0.147** 0.004
4 Anxiety				0.767** 0.000	-0.222** 0.000	0.130* 0.010	0.050 0.330	0.011 0.825	0.136** 0.007
5 Stress					-0.155** 0.002	0.093 0.068	0.069 0.176	0.065 0.204	0.177** 0.000
6 Affirmation						-0.038 0.451	0.239** 0.000	0.514** 0.000	-0.043 0.404
7 Exploration							0.481** 0.000	0.659** 0.000	0.045 0.373
8 Resolution								0.849** 0.000	0.002 0.968
9 Total_EIS-B									0.036 0.478
10 Age									

$p \leq 0.05$ * $p \leq 0.001$ **.

The spearman test results, as shown in **Table 1** above, demonstrates that discrimination is positively correlated to psychological distress ($p = 0.000$). The table also shows that discrimination is positively correlated to emotional states subscales (depression, anxiety and stress) ($p = 0.000, p = 0.003, p = 0.006$). Discrimination is negatively correlated with ethnic identity subscales affirmation and resolution ($p = 0.000, p = 0.010$) respectively but has no correlation with the exploration subscale. The table shows that the cumulative score of ethnic identity and discrimination scores have a negative relationship ($p = 0.009$). The table also shows that discrimination has a positive correlation with age of participant ($p < 0.05$).

The table shows that emotional state subscales (depression, anxiety & stress) are negatively correlated to ethnic identity subscale (affirmation) ($p = 0.000, p = 0.000, p = 0.002$). Emotional state subscales (depression & anxiety) are positively correlated to ethnic identity subscale (exploration) ($p = 0.015$). Stress has no correlation with the exploration subscale of ethnic identity.

The table shows a negative correlation between psychological distress and ethnic identity subscale (affirmation) ($p < 0.05$) but no correlation between psychological distress and ethnic identity subscales (exploration & resolution). The table shows that there is a strong positive correlation between psychological distress and the subscales of emotional states depression, anxiety and stress) ($p = 0.000$). the table

The table reveals no correlation between ethnic identity subscales Affirmation, Exploration and Resolution with age. The table also reveals that there is a strong positive correlation between emotional states depression, anxiety and stress and age of participants ($p < 0.004, p = 0.007, p = 0.000$) respectively. The analysis also reveals that there is a strong positive correlation between depression, anxiety and stress subscales ($p = 0.000$).

Table 2. Mediation model with linear regression analysis for mediating role of ethnic identity between independent variable (discrimination) and dependent variables (psychological distress, depression, anxiety and stress).

		95% CI					
	Variable	Beta	SE	LL	UL	B	P
a.	Ethnic identity EIS	0.029	0.093	-0.153	0.211	0.015	0.755
	Discrimination EDS	0.322	0.040	0.243	0.401	0.381	0.000**
b.	Ethnic identity EIS	0.043	0.105	-0.249	0.164	0.019	0.685
	Discrimination EDS	0.355	0.046	0.265	0.444	0.371	0.000**
c.	Ethnic identity EIS	0.146	0.101	-0.053	0.346	0.073	0.150
	Discrimination EDS	0.143	0.044	0.057	0.230	0.165	0.001**
d.	Ethnic identity EIS	0.130	0.101	-0.068	0.327	0.065	0.198
	Discrimination EDS	0.140	0.044	0.054	0.226	0.163	0.001**

$p \leq 0.05$ * $p \leq 0.001$ **, Note. Dependent Variables: a (Psychological Distress), b (depression), c (anxiety), d (stress).

The regression analysis results shown in **Table 2** above reveals that there is still a significant relationship between the independent variable (discrimination) and the dependent variables (psychological distress, depression, anxiety and stress) when you control the impact of the mediating variable (ethnic identity) as $p \leq 0.000$. Ethnic identity does not significantly mediate the relationship between discrimination and psychological distress. The table shows that ethnic identity does not significantly mediate the relationship between discrimination and depression, discrimination and anxiety, as well as discrimination and stress. The table also reveals reduction in psychological distress, depression, anxiety and stress scores with ethnic identity as a mediator, but the reduction was not significant.

Further regression analysis done shows that discrimination accounts for 37.8% of variance in psychological distress scores, 37.3% of variance in depression scores, 15.7% of variance in anxiety scores, and 15.6% of variance in stress scores. However, when the impact of the mediating variable (ethnic identity) is controlled, discrimination accounts for 32% of variance in psychological distress, 35.5% of variance in depression scores, 14.3% of variance in anxiety scores and 14% of variance in stress scores.

Table 3. Comparison of Racial differences in discrimination, psychological wellbeing and ethnic identity.

Variables	Race	N	Mean rank	X ²	Df	P
Discrimination	Asian	21	153.69	26.296	2	0.000**
	Black	275	211.35			
	White	89	145.58			
Psychological Distress	Asian	21	186.95	0.136	22	0.934
	Black	275	194.23			
	White	89	190.63			
Depression Subscale	Asian	21	145.43	7.269	2	0.026*
	Black	275	201.66			
	White	89	177.46			
Anxiety Subscale	Asian	21	197.19	2.176	2	0.337
	Black	275	197.61			
	White	89	177.78			
Stress Subscale	Asian	21	233.98	4.928	2	0.085
	Black	275	195.20			
	White	89	176.52			
Affirmation Subscale	Asian	21	187.52	2.337	2	0.311
	Black	275	198.06			
	White	89	178.65			
Exploration Subscale	Asian	21	211.40	12.051	2	0.002**
	Black	275	203.04			
	White	89	157.62			
Resolution Subscale	Asian	21	250.36	17.514	2	0.000**
	Black	275	200.85			
	White	89	155.22			
EIS-B Total	Asian	21	234.07	23.087	22	0.000**
	Black	275	205.44			
	White	89	144.88			

$p \leq 0.05$ * $p \leq 0.001$ **.

The Kruskal Wallis test results shown in **Table 3** above reveals that there are significant racial differences in discrimination experienced ($p = 0.000$) with black students experiencing more discrimination followed by Asians and then lastly white students. A pairwise comparison was done and revealed that these differences are significant between black and white students ($p = 0.000$) as well as between black and Asian students ($p = 0.022$). The table also shows that there is no significant difference in psychological distress according to race and no significant difference in anxiety and stress according to race. However, there is a significant difference in depression according to race ($p = 0.026$). The pairwise analysis shows that the significant difference is between Black and Asian students ($p = 0.025$). The table shows a significant difference in ethnic identity subscales Exploration and Resolution according to race ($p = 0.002$, $p = 0.000$) respectively, but no significant difference in ethnic identity subscale Affirmation according to race. Pairwise analysis revealed that the differences in ethnic identity were significant between white and black students ($p = 0.000$) as well as between white and Asian students ($p = 0.003$).

Table 4. Comparison of religious differences in discrimination, psychological well-being and ethnic identity.

Variables	Religion	N	Mean rank	X ²	Df	P
Discrimination	Christian	244	209.97	7.323	2	0.026*
	Muslim	135	182.10			
	other	6	179.50			
Psychological Distress	Christian	244	184.95	3.495	22	0.174
	Muslim	135	206.94			
	Other	6	206.94			
Depression Subscale	Christian	244	186.43	3.708	22	0.157
	Muslim	135	206.68			
	Other	6	152.33			
Anxiety Subscale	Christian	244	191.04	8.439	22	0.015*
	Muslim	135	202.05			
	Other	6	69.17			
Stress Subscale	Christian	244	190.53	0.483	22	0.785
	Muslim	135	198.04			
	Other	6	179.83			
Affirmation Subscale	Christian	244	199.97	3.219	2	0.200
	Muslim	135	179.90			
	Other	6	204.50			
Exploration Subscale	Christian	244	186.76	2.318	2	0.314
	Muslim	135	204.63			
	Other	6	185.17			
Resolution Subscale	Christian	244	184.59	4.703	2	0.095
	Muslim	135	209.34			
	Other	6	167.50			
EIS-B Total	Christian	244	186.63	3.583	22	0.167
	Muslim	135	206.34			
	Other	6	151.83			

$p \leq 0.05$ * $p \leq 0.001$ **.

The Kruskal Wallis test results shown in **Table 4** above reveals that there are significant religious differences in discrimination experiences ($p = 0.026$). The pairwise analysis shows that the difference is between Muslims and Christians ($p = 0.019$). The table also shows that there is no significant difference in psychological distress according to religion. The table also shows no significant difference in emotional states depression and stress according to religion. However, there is a significant difference in anxiety according to religion ($p = 0.015$) and the pairwise scores show that the difference is between other religion and Christians ($p = 0.024$) as well as other religion and Muslims ($p = 0.012$).

The table also shows that there is no significant religious difference in ethnic identity subscales Affirmation, Exploration and Resolution. The table also shows no significant religious differences in the cumulative score of ethnic identity.

Table 5. Comparison of educational institution's differences in discrimination, psychological wellbeing and ethnic identity.

Variables	University	N	Mean rank	X ²	Df	P
Discrimination	X	144	213.49	15.767	2	0.000**
	Y	227	175.74			
	other	14	262.11			
Psychological Distress	X	144	208.34	5.423	2	0.066
	Y	227	185.65			
	other	14	154.36			

Depression Subscale	X	144	201.60	3.858	2	0.145
	Y	227	185.07			
	other	14	233.21			
Anxiety Subscale	X	144	201.40	3.082	2	0.214
	Y	227	185.62			
	other	14	226.25			
Stress Subscale	X	144	196.48	0.730	2	0.694
	Y	227	189.66			
	other	14	211.36			
Affirmation Subscale	X	144	189.50	12.035	2	0.002**
	Y	227	200.88			
	other	14	101.18			
Exploration Subscale	X	144	182.08	5.704	2	0.058
	Y	227	196.26			
	other	14	252.54			
Resolution Subscale	X	144	192.90	1.536	2	0.464
	Y	227	195.25			
	other	14	157.61			
EIS-B Total	X	144	190.00	1.657	2	0.437
	Y	227	196.96			
	other	14	159.68			

$p \leq 0.05$ * $p \leq 0.001$ **

The Kruskal Wallis test results shown in **Table 5** above reveals that there is significant difference in discrimination experienced according to the educational institution being attended ($p = 0.000$). The pairwise analysis shows that the difference is between X and Y ($p = 0.004$) as well as other universities and Y ($p = 0.014$). The table shows that there is significant difference in ethnic identity subscale Affirmation according to the educational institution being attended. The pairwise analysis show that the significant difference is between other schools and X ($p = 0.003$) as well as other schools and Y ($p = 0.001$).

The table also shows that there is no significant difference in psychological distress, emotional states (depression, anxiety, and stress) and ethnic identity according to the university being attended.

Table 6. Comparison of educational level differences in discrimination, psychological wellbeing, and ethnic identity.

Variables	Level	N	Mean rank	X ²	df	P
Discrimination	Undergraduate	264	181.73	10.084	2	0.006
	masters	117	219.85			
	PhD	4	151.75			
Psychological Distress	Undergraduate	264	193.58	0.081	22	0.960
	masters	117	192.19			
	PhD	4	178.50			
Depression Subscale	Undergraduate	264	183.19	8.695	22	0.013*
	masters	117	217.13			
	PhD	4	134.50			

Anxiety Subscale	Undergraduate	264	177.86	15.730	22	0.000**
	masters	117	226.64			
	PhD	4	208.25			
Stress Subscale	Undergraduate	264	176.40	21.774	22	0.000**
	masters	117	232.45			
	PhD	4	134.75			
Affirmation Subscale	Undergraduate	264	193.79	12.131	2	0.002
	Masters	117	197.44			
	PhD	4	11.00			
Exploration Subscale	Undergraduate	264	187.92	2.542	2	0.281
	Masters	117	202.46			
	PhD	4	251.25			
Resolution Subscale	Undergraduate	264	188.44	6.873	2	0.032
	Masters	117	207.27			
	PhD	4	76.50			
EIS-B Total	Undergraduate	264	186.72	13.941	22	0.001**
	masters	117	212.95			
	PhD	4	23.75			

$p \leq 0.05$ * $p \leq 0.001$ **.

The Kruskal Wallis test results shown in **Table 6** above reveals that there is significant difference in depression, anxiety, stress, and ethnic identity according to educational level ($p = 0.013$, $p = 0.000$, $p = 0.000$, $p = 0.001$) respectively. The pairwise analysis shows that for depression, the difference is between undergraduate and masters students ($p = 0.018$). For anxiety, the difference is between undergraduate and masters students ($p = 0.000$). For stress, the difference is between undergraduate and masters students ($p = 0.000$) and for ethnic identity, the difference is between PhD and undergraduate students ($p = 0.011$) as well as PhD and masters students ($p = 0.002$). The table also shows that there is no significant difference in discrimination and psychological distress experienced according to educational level.

5. Discussion

The objective of this study is to investigate the impacts of discrimination on the ethnic identity, and emotional states of international students in North Cyprus. The findings of the study reveal that discrimination is positively correlated to psychological distress and emotional states such as depression, anxiety, and stress. The result is similar to the numerous studies that found that discrimination against international students was linked with greater levels of anxiety, and depression^[33-36]. This is because discrimination would result in social exclusion or isolation, which would make it harder to develop meaningful friendships or connections. Feelings of loneliness, despair, and anxiety can be further exacerbated by isolation. Discrimination may primarily harm an individual's psychological health and the occurrence of discrimination is strongly correlated with the emergence of a number of mental health conditions^[37]. The absence of support systems would make this sense of exclusion worsen and would contribute to heightened anxiety and depressive feelings^[37]. The results also agree with the findings of Anderson^[38] that discrimination strongly predicted increased levels of stress, depression and anxiety. This is because international student's sense of belonging, and identity can be challenged by discrimination^[38]. Anderson^[38] added that discrimination has the potential to cause a crisis of identity and also cultivate an ongoing sense of self-doubt among international students.

The results of the study also reveal that discrimination is negatively correlated to ethnic identity. These results agree with the findings of Yip^[39] that discrimination had detrimental impacts on ethnic identity. This is because based on ethnicity, people or groups may be marginalized or excluded due to discrimination. Those who are marginalized would have a weaker sense of ethnic identification because the pressure to adapt to the majority culture exerted on marginalized people, might help erode their sense of ethnic identity^[39]. People may

suffer from social, economic, and political disadvantages when they are the targets of discrimination. Congruent results were found in studies by Kyere^[40] and Branscombe et al.^[41] ethnic identification was negatively correlated to discrimination.

The results of this study also reveals that there is a negative correlation between psychological distress and ethnic identity. This result agrees with the findings of Yip^[42] that high ethnic identity scores were associated with low levels of psychological distress, anxiety and depressive symptoms. This is because an individual that has a strong sense of belonging to either a community or cultural group is more likely to have social support from the group^[42]. There is a negative correlation between ethnic identity and depression as there were higher levels of positive mood when there was a strong sense of ethnic identity. As a result, high ethnic identity levels were associated with psychological empowerment and resilience^[40].

The study shows that ethnic identity does not significantly mediate the impact of discrimination on psychological wellbeing (psychological distress, depression, anxiety, stress). The result from this study does not agree with findings from Mossakowski^[43] that ethnic identity significantly impacted the level of depressive symptoms. Involvement in ethnic customs, pride in one's racial or ethnic community, and social commitment to one's community could safeguard mental wellbeing and significantly reduce the psychological impact of discrimination^[43]. Kyere^[40] stated that ethnic identification tends to reduce adverse impacts associated with discrimination. This is because the more confident, steadfast, and unambiguous a person is about their sense of identity, the better able they will be to cope with discrimination. The study by Branscombe et al.^[41] showed that ethnic identity and psychological well-being were negatively impacted by experiences of discrimination. The results of the current study might be contrary to that of Mossakowski^[43] as a result of differences in exposure to Westernization. Westernization can have various impacts on ethnic identity and self-identity. Highly Westernized countries report lower levels of ethnic identity and vice versa. As the world becomes more westernized, ethnic identity is slowly being eroded. People lose the cultural bonds of common in-group behaviors, beliefs, and values that are protective and aid with the development of self-identity and self-esteem.

Furthermore, the study finds significant racial differences in discrimination experiences with black students experiencing more discrimination than other races. This finding agrees with that of the survey done by Maghazi^[20] which shows that black international students were the group that had the highest reports of discrimination. Findings from this study also agree with that of Wood^[43] that African Americans (Blacks) were the group discriminated against the most. This can be due to the history of racial segregation, and prejudice against black people. There are still racial inequities in society as a result of these historical problems^[44]. Findings from this study also concur with that of Shiner et al.^[45] that found significant racial disparities in stop and search exercises conducted by the police force in the United States with black people being racially profiled and discriminated against the most. In the study by Shiner et al.^[45], the history slavery and systemic racism was highlighted as the reason for such findings as these historical injustices have had long-lasting effects, leading to racial disparities in various aspects of society, including law enforcement. Racial stereotypes and cultural distance may account for the significant differences in discrimination seen in the current study.

Findings from this study also show a significant difference in psychological distress and depression according to race as black international students recorded higher scores of depression and psychological distress. This result agrees with that of Bailey et al.^[46] with showed that black people were the group more likely to suffer from prolonged, chronic, and severely debilitating depression. However, Bailey et al.^[46] also noted that ethnic minorities, particularly black people, were less likely to seek mental health care than their Caucasian (White) counterparts, and this might be a factor that plays a significant role in the study's findings. It is also relevant to state that stress and trauma caused by racial discrimination may increase the risk of depression and from the findings of this study, black international students are often the group most

discriminated against, and as such black students also reported the highest scores for depression^[47]. However, the Black-White health paradox contrary to the findings of this study states that black people are less likely to suffer from depression than white people^[48]. Mixed results show that the relationship between race and mental health may be mediated by various factors.

The findings from this study reveal that discrimination is positively correlated with age. This result agrees with the findings of Gutierrez and Mayordomo^[49] that older students experience more discrimination. Older students are frequently portrayed as less adaptable, motivated, and competent than younger students. The results are also similar to the findings of Chou et al.^[45] that older people experience more discrimination. This may be because of the widespread negative stereotypes society holds about old people. These preconceptions may result in discriminatory or unfair treatment towards older students^[50].

The results from this study also revealed that there are significant religious differences in discrimination experienced with Christian international students who reported more discrimination than any other religious group. This result agrees with reports by the European Union that although Christianity is expected to still be the dominant religion by 2050, in certain regions Christians face more discrimination^[51]. Christians are possible targets due to their minority position in areas like the Middle East, Asia, and North Africa and as such would report more experiences of religious discrimination in these regions. The findings from this study show that there is no significant difference in depression and stress according to religion but a significant difference in anxiety according to religion. Muslims reported higher levels of anxiety than other religions.

The result from this study shows that there is significant difference in depression, anxiety, and stress according to educational level. This is also similar to the findings of Evan et al.^[52] that graduate students are six times more susceptible to anxiety and depression than their counterparts. Graduate students may experience higher levels of stress and anxiety^[51] due to the need to balance multiple responsibilities, such as the financial burden of education, school research, and internships, as well as the pressure to excel academically. Balancing work-life with education was seen as one of the key explanations for master's students have higher levels of depression and anxiety^[53]. As opposed to doctorate and undergraduate students, masters are compressed to shorter timeframes which may increase educational pressure resulting in higher levels of depression, anxiety, and stress.

The findings from this study also show that there is significant difference in discrimination experienced according to the educational institution being attended. According to Brauer and Er-rafiy^[54] discrimination tends to be lower in schools with a more diverse student body and a strong emphasis on cultural awareness and inclusion. Discrimination will be lower in schools that offer sufficient help for incorporation of international students into the academic and social fabric of the institution. Sharing culture and describing other groups in positive terms also helps reduce stereotyping and discrimination^[55].

6. Conclusions and recommendations

This study investigated the relationship between discrimination, psychological distress, emotional states of depression, anxiety and stress, and ethnic identity among university students in North Cyprus. The results of this study show a positive relationship between discrimination and psychological distress. International students who reported high discrimination scores showed higher levels of stress and depression because of social isolation. The study reveals that ethnic identity is negatively correlated with discrimination and psychological distress. The study also shows that ethnic identity does not mediate the impact of discrimination on psychological wellbeing (psychological distress, depression, anxiety, stress).

Additionally, this study indicates that black international students are the group discriminated against the most followed by Asians and white international students experienced the least discrimination. This study also showed significant disparities in discrimination based on religion with international students who identified as Christians being discriminated against the most. This might be hugely due to the fact that the TRNC is predominantly a Muslim nation. The findings also imply that Black foreign students had greater rates of depression and psychological discomfort than Asian and white international students. Muslim students were found to have higher anxiety scores. According to the findings of this study Asian international students have a stronger feeling of ethnic identification than their counterparts.

7. Recommendations for future research

- The convenience sampling method that was used for the data collection of this study has the drawback of not accurately representing the population being studied and limiting the ability to generalize the results. As a result, it is suggested that additional research be carried out to include more universities in North Cyprus in order to acquire a deeper comprehension of the research questions and ascertain whether or not the outcomes are consistent.
- Further research should investigate other variables that mediate the relationship between discrimination and psychological wellbeing such as cultural distance and ethnic identity.

8. Recommendation for practice

- It is recommended that academic institutions encourage the knowledge and celebration of each other's cultures to help highlight similarities when assumptions often focus on differences. Awareness of different cultures and their difficulties will help create empathy and reduce discrimination. This may be accomplished through educational initiatives, training sessions, and gatherings that promote inclusion, cultural sensitivity, and empathy.
- Introduction of an authentic sustainability curriculum that advocates for equality and cooperation in education conduct and practice.
- Educational institutions can enhance or broaden the range of support services offered to international students in order to help them adjust to their new environment and maintain good mental health. Such support services could include orientation programs, counselling and mental health services, international student clubs and organizations among others.
- Based on the findings from this study which reveals that discrimination increases mental health issues such as depression anxiety and stress, it is recommended that University administrations create and improve systems for reporting instances of discrimination or harassment. Encourage kids to come forward with such instances and make sure the proper steps are done to resolve them. Academic institutions can also create a supportive network and platform for international students to support one another and raise awareness of discrimination-related issues by working together.

Author contributions

Conceptualization, SSO and GM; methodology, SSO; formal analysis, SSO and GM; investigation, SSO; resources, SSO and GM; writing—original draft preparation, SSO; writing—review and editing, SSO and GM; visualization, SSO; supervision, GM; All authors have read and agreed to the published version of the manuscript.

Conflict of interest

The authors declare no conflict of interest.

Reference

1. Fredman S. *Discrimination law*, 2nd ed. Oxford University Press. 2011.
2. Anderson E. *The imperative of integration*. Princeton University Press. 2010.
3. Pager D, Shepherd H. The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets. *Annual Review of Sociology*. 2008, 34(1): 181-209. doi: 10.1146/annurev.soc.33.040406.131740
4. Webber M, Madden-Smith A. Learning, cognition and human development. In: Tierney RJ, Rizvi F, & Ercikan K. (Eds.). *International Encyclopaedia of Education*, 4 ed. Elsevier Inc. 2023.
5. Tajfel H. *Human groups and social categories: Studies in Social Psychology*. Cambridge University Press. 1981.
6. Allport GW. *The nature of prejudice*. Addison-Wesley. 1954.
7. Lichtenberg J. Negative Duties, Positive Duties, and the “New Harms.” *Ethics*. 2010, 120(3): 557-578. doi: 10.1086/652294
8. Rosenthal L, Overstreet N. Stereotyping. *Encyclopedia of Mental Health*. Published online 2016: 225-229. doi: 10.1016/b978-0-12-397045-9.00169-5
9. Weeks MR, Sullivan AL. Discrimination Matters: Relations of Perceived Discrimination to Student Mental Health. *School Mental Health*. 2019, 11(3): 425-437. doi: 10.1007/s12310-019-09309-1
10. Council of Europe. Tackling discrimination. Council of Europe portal. Available online: https://www.coe.int/en/web/campaign-free-to-speak-safe-to-learn/tackling-discrimination/-/asset_publisher/4a3esYbkstv9/content/improving-well-being-at-school (accessed on 05 December 2023).
11. T Tang Y, Hu J. The impact of teacher attitude and teaching approaches on student demotivation: Disappointment as a mediator. *Frontiers in Psychology*. 2022, 13. doi: 10.3389/fpsyg.2022.985859
12. Lengyel A, Szóke S, Kovács S, et al. Assessing the essential pre-conditions of an authentic sustainability curriculum. *International Journal of Sustainability in Higher Education*. 2019, 20(2): 309-340. doi: 10.1108/ijshe-09-2018-0150
13. Kreber C. *Authenticity in and through Teaching in Higher Education*. Routledge, 2013. doi: 10.4324/9780203072301
14. Fromm E. *To Have or to Be?* A&C Black. Bloomsbury. 2013.
15. Schein EH. The role of organization development in the human resource function. In: Vogelsang J, Townsend M, Minahan M, et al. *Handbook for Strategic HR: Best Practices in Organization Development from the OD Network*. AMACOM Division of American Management Association. International. 2013.
16. Ruck MD, Wortley S. Racial and Ethnic Minority High School Students’ Perceptions of School Disciplinary Practices: A Look at Some Canadian Findings. *Journal of Youth and Adolescence*. 2002, 31(3): 185-195. doi: 10.1023/a: 1015081102189
17. Ali S, Yoenanto NH, Nurdibyanandaru D. Language Barrier cause of stress among International Students of Universitas Airlangga. *Prasasti Journal of Linguistics*. 2020, 5(2), 2527-2969. doi: 10.20961/prasasti.v5i2.44355
18. Rodriguez EJ, Livaudais-Toman J, Gregorich SE, et al. Relationships between allostatic load, unhealthy behaviors, and depressive disorder in U.S. adults, 2005–2012 NHANES. *Preventive Medicine*. 2018, 110: 9-15. doi: 10.1016/j.ypmed.2018.02.002
19. Kefayati E. *The Relationship between Acculturative Stress, Perceived Social Support, and Perceived Discrimination in International Students* [Unpublished Master’s dissertation]. Eastern Mediterranean University. 2016.
20. Maghazi AE. *Evaluating Racism in the TRNC: Survey report*. Voice cyprus. 2020.
21. Marney AW. Psychological Impact of Racism and Discrimination for African Americans, *Journal of Counseling Psychology*. 2020, 55(1), 49.
22. McQuate S. *Single discrimination events alter college students’ daily behavior*. University of Washington News. 2019.
23. Macedo DM, Smithers LG, Roberts RM, et al. Does ethnic-racial identity modify the effects of racism on the social and emotional wellbeing of Aboriginal Australian children? *Eapen V, ed. PLOS ONE*. 2019, 14(8): e0220744. doi: 10.1371/journal.pone.0220744
24. Lora LB, Rhonda J, Lisa V. *The Relationship Between Perceived Racism/Discrimination and Health Among Black American Women*. Springer. 2014.
25. Lanier Y, Sommers MS, Fletcher J, et al. Examining Racial Discrimination Frequency, Racial Discrimination Stress, and Psychological Well-Being Among Black Early Adolescents. *Journal of Black Psychology*. 2016, 43(3): 219-229. doi: 10.1177/0095798416638189

26. Cheng HL. Xenophobia and Racism Against Asian Americans During the COVID-19 Pandemic: Mental Health Implications. *Journal of Interdisciplinary Perspectives and Scholarship*. 2020, 3(3), 100-113.
27. Saunders M, Lewis P, Thornhill A. *Research methods for business students*, 6th edition. Pearson Education Limited. 2012.
28. Williams DR. Everyday Discrimination Scale, *Journal of Health Psychology* SAGE Publications. 1997, 40, 05-25. doi: 10.1177/13591053970020030
29. Kessler R, Mroczek D. Kessler psychological distress scale. Ann Arbor, MI: Survey Research Centre of the Institute for Social Research, University of Michigan press. 1992.
30. Lovibond SH, Lovibond PF. *Manual for the Depression Anxiety Stress Scales*, 2nd ed. Psychology Foundation of Australia. 1995.
31. Douglass S, Umaña-Taylor AJ. A Brief Form of the Ethnic Identity Scale: Development and Empirical Validation. *Identity*. 2015, 15(1): 48-65. doi: 10.1080/15283488.2014.989442
32. Umaña-Taylor AJ. Ethnic identity and self-esteem: examining the role of social context. *Journal of Adolescence*. 2003, 27(2): 139-146. doi: 10.1016/j.adolescence.2003.11.006
33. Chen JH, Li Y, Wu AMS, et al. The overlooked minority: Mental health of International students worldwide under the COVID-19 pandemic and beyond. *Asian Journal of Psychiatry*. 2020, 54: 102333. doi: 10.1016/j.ajp.2020.102333
34. Reskin B. The Race Discrimination System. *Annual Review of Sociology*. 2012, 38(1): 17-35. doi: 10.1146/annurev-soc-071811-145508
35. Lee Y, Bierman A. Loneliness as a Mediator of Perceived Discrimination and Depression: Examining Education Contingencies. *The International Journal of Aging and Human Development*. 2018, 89(2): 206-227. doi: 10.1177/0091415018763402
36. Kwon E, Fisher S, Lin HC, et al. Racial discrimination, childhood adversity, and depression among Black men: Tests of stress sensitization hypotheses. *Psychiatry Research*. 2023, 325: 115257. doi: 10.1016/j.psychres.2023.115257
37. Pascoe EA, Smart Richman L. Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin*. 2009, 135(4): 531-554. doi: 10.1037/a0016059
38. Anderson KF. Diagnosing Discrimination: Stress from Perceived Racism and the Mental and Physical Health Effects*. *Sociological Inquiry*. 2012, 83(1): 55-81. doi: 10.1111/j.1475-682x.2012.00433.x
39. Yip T. Ethnic/Racial Identity—A Double-Edged Sword? Associations With Discrimination and Psychological Outcomes. *Current Directions in Psychological Science*. 2018, 27(3): 170-175. doi: 10.1177/0963721417739348
40. Kyere E, Rudd SE, Fukui S. The Role of Racial–Ethnic Identity in Understanding Depressive Symptoms in the Context of Racial Discrimination Among African American Youth. *Journal of the Society for Social Work and Research*. 2022, 13(2): 261-279. doi: 10.1086/711700
41. Branscombe NR, Schmitt MT, Harvey RD. Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology*. 1999, 77(1): 135-149. doi: 10.1037/0022-3514.77.1.135
42. Yip T. Sources of Situational Variation in Ethnic Identity and Psychological Well-Being: A Palm Pilot Study of Chinese American Students. *Personality and Social Psychology Bulletin*. 2005, 31(12): 1603-1616. doi: 10.1177/0146167205277094
43. Mossakowski KN. Coping with Perceived Discrimination: Does Ethnic Identity Protect Mental Health? *Journal of Health and Social Behavior*. 2003, 44(3): 318. doi: 10.2307/1519782
44. Wood R. Discrimination in America: Experiences and Views. Available online: <https://www.rwjf.org/en/insights/ourresearch/2017/11/discrimination-in-america--experiences-and-views.1> (accessed on 02 July 2023).
45. Shiner M, Carre Z, Delsol R, Eastwood N. The Colour of Injustice: ‘Race’, drugs and law enforcement in England and Wales. *StopWatch & Release*. 2017.
46. Bailey R, Mokonogho J, Kumar A. <, p>, Racial and ethnic differences in depression: current perspectives<, /p>, *Neuropsychiatric Disease and Treatment*. 2019, Volume 15: 603-609. doi: 10.2147/ndt.s128584
47. Ettman CK, Koya SF, Fan AY, et al. More, less, or the same: A scoping review of studies that compare depression between Black and White U.S. adult populations. *SSM - Mental Health*. 2022, 2: 100161. doi: 10.1016/j.ssmmh.2022.100161
48. Woody ML, Bell EC, Cruz NA, et al. Racial Stress and Trauma and the Development of Adolescent Depression: A Review of the Role of Vigilance Evoked by Racism-Related Threat. *Chronic Stress*. 2022, 6: 247054702211185. doi: 10.1177/24705470221118574
49. Gutiérrez M, Mayordomo T. La discriminación por edad: un estudio comparativo entre estudiantes universitarios. *Acta Colombiana de Psicología*. 2019, 22(2): 53-61. doi: 10.14718/acp.2019.22.2.4
50. Chou RJA, Choi NG. Prevalence and correlates of perceived workplace discrimination among older workers in the United States of America. *Ageing and Society*. 2011, 31(6): 1051-1070. doi: 10.1017/s0144686x10001297

51. Think Tank. Violence and persecution levelled at Christians around the world. European parliament. Available online: [https://www.europarl.europa.eu/thinktank/mt/document/EPRS_BRI\(2015\)572800](https://www.europarl.europa.eu/thinktank/mt/document/EPRS_BRI(2015)572800) (accessed on 08 November 2023).
52. Evans T, Lindsay B. Depress and Anxiety in Graduate Students. Available online: <https://news.utihscsa.edu/survey-shows-depression-anxiety-high-graduate-students/> (accessed on 06 June 2023).
53. Allen HK, Barrall AL, Vincent KB, et al. Stress and Burnout Among Graduate Students: Moderation by Sleep Duration and Quality. *International Journal of Behavioral Medicine*. 2020, 28(1): 21-28. doi: 10.1007/s12529-020-09867-8
54. Brauer M, Er-rafiy A. Increasing perceived variability reduces prejudice and discrimination. *Journal of Experimental Social Psychology*. 2011, 47(5): 871-881. doi: 10.1016/j.jesp.2011.03.003
55. Brauer M, Er-rafiy A, Kawakami K, et al. Describing a group in positive terms reduces prejudice less effectively than describing it in positive and negative terms. *Journal of Experimental Social Psychology*. 2012, 48(3): 757-761. doi: 10.1016/j.jesp.2011.11.002