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The role of acculturation attitudes and social support in anxiety and depression of Indian immigrants in Greece

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In the present study, we examined factors that may impact immigrants' anxiety and depressive symptoms, focusing on the role of acculturation attitudes and social support. The participants of the present study were first generation Indian immigrants residing in Crete, Greece (N=114).

Our first hypothesis was that Indian immigrants will choose two acculturation attitudes, namely integration and separation, as these may enable them maintain certain aspects of their culture of origin given their distinct differences from Greeks in religion, cultural values, and physical appearance. It was also hypothesized that integration and separation will be positively related to social support. Social support was also expected to mediate the negative relationship of separation and integration to anxiety and depression. Furthermore, social support was expected to act protectively for Indian immigrants who chose integration and separation, minimizing the levels of anxiety and depression (i.e., a moderation effect). Using specific measures for anxiety, depression, social support, and acculturation attitudes, the results showed that Indian immigrants report a greater preference for integration and separation. Separation was the only acculturation attitude positively related to social support and negatively to depression through social support from friends and family. Moreover, higher levels of social support seemed to protect immigrants who choose integration from depression and medium and high levels of social support protected immigrants who choose assimilation from anxiety. These findings indicate that both integration and separation are preferred by Indian immigrants in Greece. Moreover, it seems that in the case of Indian immigrants in Greece, separation could be related to more immigrants' social support than other acculturation attitudes, ending in turn to less depression symptoms. These findings demonstrate that different acculturation attitudes (i.e. assimilation, integration, separation) may have different effects on dis-

tinct psychological indices. Moreover, immigrants' social support is a protecting factor in the relationship between acculturation attitudes to anxiety and depression. The present study suggests that the increase of the immigrants' social networks could prove helpful for their adaptation to the Greek society.

Key words: Acculturation, anxiety, depression, social support, Indian immigrants.

Introduction

In recent decades, Greece has become one of the "recipient" countries of immigrants from the Balkans and several Asian countries.¹ Even though most findings suggest that immigrants in Greece prefer integration or assimilation over separation²⁻⁴ which are related to lower levels of depression, the role of the acculturation attitudes of Indian immigrants in Greece and the social support they receive in anxiety and depression feelings has never been studied before. Less assimilated immigrants seem to experience in Attica more cultural dissonance and conflict with host culture,⁵ but a crucial question remains: if it is feasible and adaptive for immigrants with many cultural differences from Greeks to become assimilated. Asians in general face more difficulties in their integration to Greek society because of their racial distinctness and differences in religion which makes Greeks more suspicious and distant.⁶ For this reason, it is important to examine if Indians choose the same acculturation attitudes as Balkan immigrants (e.g. Albanians) and if the social support they receive affect their anxiety and depression feelings.

Acculturation refers to all those changes that arise when individuals and groups with different cultural backgrounds come into contact.⁷ Most of the behavioral and cultural changes are observed in those immigrants that choose assimilation, that is defined as a lack of interest in maintaining their own cultural identity, and focusing on their daily interaction with other cultures.⁸ On the other hand, fewer changes are observed in the case of separation, which is defined as the immigrants' tendency to be separated from the host country and to focus on their culture of origin. The integration strategy lies somewhere in the middle, as it facilitates the maintenance of fundamental cultural traits and, at the same time, enables the individual to participate

in the wider social network, thus, combining both cultures.⁸

The acculturation attitudes that immigrants adopt are significant socio-cultural factors related to anxiety and depression. It seems that most immigrants prefer integration that is regarded as the most adaptive attitude, ending in less anxiety and depression symptoms.⁸⁻¹¹ Marginalization, on the other hand, represents the worst acculturation choice, because the person isolates himself from both hosts and co-nationals, while separation and assimilation lie somewhere in the middle, between integration and marginalization.¹²

However, when there is greater cultural distance and incompatible values between hosts and immigrants, psychological conflicts may arise, with elevated anxiety and depression symptoms.¹⁰ Social support is regarded as a benefit of integration¹³ and ameliorates the negative effects of acculturative stress on immigrants' anxiety and depression.¹³⁻¹⁷ However, there are several studies in which immigrants prefer separation, which is related to a stronger connectedness with co-nationals and less anxiety and depression symptoms, in turn.¹⁸⁻²² Separation seems to be preferred by those immigrants with distinguishing features and phenotypic differences from hosts^{8,19-22} and to be associated positively with social support from family and friends.²³ Integration might also be adaptive for immigrants with distinct cultural values, as far as it enables the maintenance of fundamental cultural traits and emotional investment in both co-nationals and hosts,^{24,25} ending, in turn, in less anxiety and depression symptoms.⁴ Assimilation, on the other hand, alters cultural identity²⁴ and may endanger in-group relationships,²⁵ increasing conflicts with family, as immigrant cultural values and social be-

havior totally change. These conflicts, in turn, may lead to more anxiety and depression.²⁶

The aim of the present study was to examine the interrelationship between acculturation attitudes of Indian immigrants in Greece, social support they receive, and anxiety and depression feelings. It was hypothesized that due to their racial distinctness and differences in religion⁶ Indians would choose the acculturation attitudes of integration and separation over assimilation and marginalization. Integration, defined by Berry¹⁰ as the interest in maintaining one's original culture and having daily interactions with other groups, could enable Indian immigrants to preserve some of their own cultural elements, while still participating in the wider social network, thus combining both cultural contexts. Alternatively, they may choose separation,²⁴ defined as preserving one's original culture and avoiding interaction with other groups. Both acculturation attitudes involve the preservation of immigrants' original cultural traits, even if represent different acculturation attitudes.¹⁰ It was also expected that social support is going to be related positively to integration and separation. Furthermore, through social support (mediator), Indians who choose integration and separation are going to end in less anxiety and depression symptoms,^{18-19,23} given that the maintenance of some fundamental cultural traits of their country of origin would not endanger in-group relationships.²⁵ Furthermore, it was also expected that social support would act protectively (i.e. moderation effect) for Indians who chose integration and separation,²⁷ minimizing depression and anxiety symptoms, given that social support ameliorates the negative effects of acculturation stress on immigrants' anxiety and depression.¹³⁻¹⁷ The theoretical model of the present study is presented in figure 1.

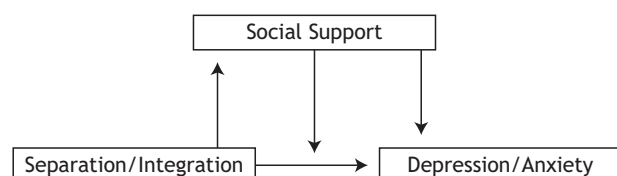


Figure 1. Hypothesized Model: Social support acts as mediator and moderator in the relationship between separation/integration and depression/anxiety.

Material and method

Participants

One hundred and fourteen (114) adult Indian immigrants in Greece participated in the study (see the samples characteristics in table 1). All participants were first generation Indian immigrants residing in Crete. Most participants were male (74.8%), married (77%), and unskilled workers (62.2%). As far as the sample's religion is concerned, the majority were Sikhs (81.3%).

Measures

Acculturation attitudes. Acculturation was measured with the Acculturation Attitudes Scale.²⁴ The scale consists of 20 items and assesses acculturation attitudes (i.e. assimilation, integration, separation and marginalization), in five domains of life: marriage, language, cultural traditions, social activities and friends. Participants respond on a Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (5). Cronbach's alpha for all scales are presented in table 1.

Depressive symptoms. Depression was assessed by the Center for Epidemiologic Studies - Depression scale (CES-D).²⁸ It consists of 20 questions and participants respond on a Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (5).

Anxiety symptoms. Anxiety was assessed by the State Anxiety Inventory.²⁹ For the present study it was used the translated form of the scale of Motti-Stefanidi et al.³⁰ It consists of 20 items and participants respond on a Likert-type scale ranging from "not at all" (1) to "very much" (4).

Social support. Social support was measured with the Significant Other's Scale.³¹ It consists of four questions, which assess emotional support and practical support received by friends and spouse. Participants respond on a Likert-type scale ranging from 1 ("always") to 7 ("never").

Procedure and analyses

Adult Indian immigrants were recruited mainly in a building that they use for their religious ceremonies, using a convenience sampling technique. Each measure was translated into the Punjabi language from the English language and translated back to English³² by the Department of Linguistic Studies at the Punjabi

Table 1. Means, Standard Deviations (SD) and Bivariate Correlations among Acculturation Attitudes, Social Support, Age, Education, Years of Residence, Depression and Anxiety.

	1	2	3	4	5	6	7	8	9	10
1. State Anxiety	--									
2. CES-D	0.56**	--								
3. Integration	0.12	-0.02	--							
4. Assimilation	-0.06	0.14	0.32**	--						
5. Separation	0.12	-0.12	-0.31**	0.01	--					
6. Marginalization	0.11	0.30**	0.16	0.42**	-0.02	--				
7. Social Support	-0.05	-0.23	-0.01	-0.17	0.40**	-0.11	--			
8. Age	-0.15	-0.22*	0.04	-0.09	-0.23*	-0.05	0.07	--		
9. Education	-0.11	0.21*	-0.01	-0.10	-0.15	-0.17	-0.10	-0.08	--	
10. Years of Residence	-0.08	-0.01	-0.07	-0.05	-0.11	-0.08	0.07	0.51**	0.18	--
Mean	41.5	17.4	18.8	10.2	16.6	9.90	21.3	33.2	11.2	7.73
SD	8.27	9.64	3.56	3.91	4.65	3.56	3.45	7.97	2.70	3.96
Cronbach's α	0.82	0.82	0.70	0.67	0.72	0.60	0.64	0.00	0.00	0.00

* $p < 0.05$, ** $p < 0.01$

University. In order to examine the mediation effects of social support on the relation of acculturation attitudes to anxiety and depression, as well as the potential moderating effects of social support, a set of analyses were performed included in PROCESS, which is a freely-available computational tool for SPSS and SAS.^{33,34} According to this approach, the indirect and moderation effects are significant at $p < 0.05$ for the 95% bootstrap confidence intervals, when the derived intervals do not include values of zero.

Results

The means, standard deviations, and the bivariate correlation matrix of the variables included in this study are presented in table 1. First, a comparison was conducted between the factors of acculturation scale (i.e. means of integration, assimilation, separation, and marginalization). According to the results, the first preference seems to be for integration ($M=18.8$, $SD=3.56$). Separation was the second preference ($M=16.6$, $SD=4.65$), assimilation was the third ($M=10.2$, $SD=3.91$) and marginalization the last one ($M=9.86$, $SD=3.56$). Regarding the bivariate correlations between social support and acculturation attitudes, separation was the only acculturation attitude that was positively correlated to social support; integration, assimilation, and marginalization were not related to social support (table 1).

In order to examine the indirect relation of acculturation attitudes to anxiety and depression through social support (mediation), PROCESS^{33,34} was used. The results indicated that social support mediated only the relationship between separation and depression and not the relationship between separation and anxiety. No mediation effect was found for the relationships between depression and integration, assimilation, and marginalization or between anxiety and integration, assimilation, and marginalization (table 2).

Next, PROCESS³³ was used to examine the moderation effects of social support. The relationship between integration and depression was significant only at the higher levels (+1 SD) of social support and the relationship between assimilation and anxiety was significant at the higher (+1 SD) and medium (M) levels of social support. No moderation effect of social support on anxiety and depression was found regarding separation and marginalization (table 3).

Discussion

The present study underscores the crucial role of social support in the relationship of Indian immigrants' acculturation attitudes with anxiety and depression. First, it was found that through social support (mediator), Indians who choose separation end in less de-

Table 2. The Indirect and Direct Effects of Acculturation Attitudes on Anxiety and Depression, through Social Support (Mediation).

	β	SE	p	R^2	Bootstrapping			
					95% Confidence Intervals*			
					Indirect effects		Direct effects	
					Lower	Upper	Lower	Upper
<i>Dependent variable:</i>								
<i>Depression</i>								
Integration	0.01	0.16	0.82	0.00	-0.19	0.45	-1.00	0.24
Assimilation	-0.06	0.10	0.47	0.00	-0.31	0.09	-0.94	0.59
Separation	-0.31	0.12	0.00	0.17	-0.77	-0.09	-0.50	0.63
Marginalization	0.04	0.08	0.52	0.00	-0.06	0.31	-0.42	0.96
<i>Dependent variable:</i>								
<i>Anxiety</i>								
Integration	0.00	0.09	0.89	0.00	-0.10	0.19	-0.73	0.59
Assimilation	0.03	0.07	0.06	0.14	-0.08	0.37	-1.60	-0.27
Separation	0.07	-0.03	0.11	0.05	-0.31	0.04	-0.37	0.78
Marginalization	0.02	0.06	0.16	0.04	-0.07	0.21	-0.97	0.49

*Bootstrapping bias corrected and accelerated (5,000 bootstrap samples). Indirect and direct effects are significant at $p < .05$ for the 95% bootstrap confidence intervals, when the derived intervals do not include values of zero

pressive symptoms. Secondly, social support minimizes Indians' anxiety and depression levels in the case of integration and assimilation. Social support is defined as the perception that someone is loved, cared for, estimated and that they belong to a wider social network with mutual assistance and obligations.³⁵ Family and friends are rated as two of the most significant sources of immigrants' social support and many newcomers rely more on friends and family to overcome settlement difficulties rather than on health and social service organizations.³⁶ Only one study in Greece so far, to our knowledge, has examined the role of social support in adult immigrants in Greece³⁷ and the present findings underscore its importance. Moreover, in future studies it should be further examined the inter-relationship of social support and acculturation.

As expected, Indian immigrants in Greece showed a greater preference for integration and separation.²⁴ In the cases of separation, immigrants' tend to be separated from the host country and to focus on their culture of origin. In the case of integration, immigrants maintain their fundamental cultural traits and, at the same time, participate in the wider social network, thus, combining both cultures.⁸ It is suggested

that separation may not be incompatible with integration, in that a person may desire to keep contact with the majority while not considering it important to adopt the majority's culture.³⁸ Furthermore, both acculturation attitudes enable the maintenance of immigrants' fundamental cultural traits.⁸ Although, integration was not related to social support in contrast to the study hypothesis,⁸ a positive relationship of separation and social support was found. Given that separation enables the maintenance of cultural identity,^{10,24} while integration may cause cultural changes that are incompatible with the Indian way of life, it is possible for family and friends to be more supportive for Indians who maintain their cultural identity than for Indians who behave differently from their cultural norms.^{23,39} Namely, in future studies should be examined if the cultural changes of certain acculturation attitudes may cost to the individual its social exclusion from the co-ethnics.

Moreover, a negative relationship between separation and depression through social support was identified, indicating that Indians who choose separation receive more social support and end in less depression.^{18,19,23,25} No mediation effect was found for

Table 3. Mean Indirect Effects (SE in Parentheses; Confidence Intervals in Brackets) of Acculturation attitudes on Depression and Anxiety, at Specific Values of Social Support (Moderation), and Confidence Intervals.

	Levels of Social Support				
	R ²	p	-1 SD [CI (95%) ^a]	M [CI (95%) ^a]	+1 SD [CI (95%) ^a]
<i>Dependent variable:</i>					
<i>Depression</i>					
Integration	0.11	0.00	-0.16 (0.29) [-0.75 to 0.42]	-0.58 (0.32) [-1.23 to 0.07]	-1.00 (0.44) [-1.90 to -0.10]
Separation	0.12	0.10	0.16 (0.50) [-0.84 to 1.16]	0.07 (0.30) [-0.53 to 0.68]	-0.00 (0.25) [-0.51 to 0.49]
Assimilation	0.06	0.30	0.19 (0.45) [-0.71 to 1.10]	-0.12 (0.35) [-0.84 to 0.58]	-0.45 (0.50) [-1.46 to 0.55]
Marginalization	0.08	0.32	0.67 (0.59) [-0.46 to 1.81]	0.16 (0.36) [-0.57 to 0.90]	-0.34 (0.60) [-1.54 to 0.85]
<i>Dependent variable:</i>					
<i>Anxiety</i>					
Integration	0.03	0.41	0.08 (0.29) [-0.51 to 0.68]	-0.20 (0.32) [-0.85 to 0.44]	-0.49 (0.42) [-1.34 to 0.35]
Separation	0.01	0.88	0.30 (0.49) [-0.68 to 1.29]	0.22 (0.32) [-0.42 to 0.88]	0.15 (0.31) [-0.47 to 0.78]
Assimilation	0.17	0.04	-0.54 (0.42) [-1.40 to 0.30]	-0.96 (0.34) [-1.65 to -0.27]	-1.38 (0.51) [-2.42 to -0.34]
Marginalization	0.01	0.94	-0.23 (0.46) [-1.16 to 0.69]	-0.24 (0.47) [-1.20 to 0.72]	-0.24 (0.71) [-1.69 to 1.19]

Note: SD=standard deviation, CI=confidence intervals. a Bootstrapping bias corrected and accelerated (5,000 bootstrap samples). Indirect and direct effects are significant at $p < 0.05$ for the 95% bootstrap confidence intervals, when the derived intervals do not include values of zero. Bias corrected and accelerated.

anxiety. Anxiety may be related to factors that were not measured in the present study, such as stress coping mechanisms.^{9,11,40} Furthermore, as expected, high levels of social support moderated the relationship of integration to depression. High social support protected Indians who chose integration from depression emphasizing the importance of social networks from co-nationals and hosts.⁸⁻¹¹ However, contrary to the study hypothesis, immigrants with higher and medium levels of social support who chose assimilation (and not separation) were protected from anxiety. A possible explanation could be that when immigrants receive in-group social support, assimilation may facilitate the implementation of their personal goals and ambitions, such as getting a better job or gaining more money in mainstream society,^{8,41} thus minimizing anxiety levels.⁴²

In conclusion, our findings suggest that separation, integration and assimilation are neither beneficial

nor detrimental for immigrants' psychological health. Interactions between variables are the key to understand immigrants' behavior and health. The interaction of social support with acculturation attitudes needs to be further examined. These findings, also, demonstrate that different acculturation attitudes (i.e. assimilation, integration) may have different effects^{8,43,44} on distinct psychological indices (i.e. anxiety, depression). Gonidakis et al⁴ found that more assimilation strategies are related to lower levels of depression in the Attica region. Furthermore, as mentioned before, according to Prapas and Mavreas,⁵ less assimilated immigrants in Attica experience more cultural dissonance and conflict with host culture, especially in societies with assimilation pressures toward immigrants. However, our study found that in rural areas of Greece, the maintenance of cultural heritage of immigrants' origin (integration and separation) was associated with lower levels of depression. Factors such

as ethnicity, as suggested by Gonidakis et al,⁴ cultural differences between western and Asian immigrants, as suggested by Kateri and Karademas,⁴⁵ living area (urban or rural) and the host community acculturation preferences^{5,46,42} could contribute to the interpretation of the aforementioned findings.

In the present study a convenience sample and a relatively small one was used. Longitudinal studies in many immigrant groups are needed to advance our theoretical understanding for the benefits of social support in different acculturation contexts. Immigrants in Greece are not a homogenous group and the generalizations from one group to another should be avoided. There is the possibility that, for immigrants who are markedly different from Greeks, such as Indians, separation could offer some benefits that should be examined in future studies. Counselors may, also, find it fruitful to explore with Indian clients the advantages and disadvantages of each acculturation choice, and to reinforce relationship bonds as an effective mechanism towards reducing loneliness and psychological dysfunction. Furthermore, it is important to note that social support, like other aspects of behavior, takes

place within a cultural and a social context and the decision to ask for it, as well as the specific type of social support that is asked for, is affected by cultural values that must be explored in counseling or psychotherapy. In some cases, for example, sharing problems or other forms of "actual" social support might burden others and endanger close relationships. Counselors should be aware that sometimes "actual" social support is not the only helpful form of support and that perceived social support may be equally useful than actual support. Therefore, if the client hesitates to ask for emotional or practical help during stressful periods, the counselor may be useful by helping them acknowledge that there are actually people who do care about them regardless of their choice to or not ask for help. Cultural norms regarding the differences in social support are usually resistant to change, but the perception that someone is loved and cared for may reduce stress and loneliness on its own.³⁷

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Ο ρόλος των στρατηγικών επιπολιτισμού και της κοινωνικής στήριξης στο άγχος και στην κατάθλιψη Ινδών μεταναστών στην Ελλάδα

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Στην παρούσα έρευνα εξετάστηκαν οι παράγοντες που επηρεάζουν την ψυχική υγεία των μεταναστών, εστιάζοντας στον ρόλο των στρατηγικών επιπολιτισμού και της κοινωνικής στήριξης. Οι συμμετέχοντες της παρούσας έρευνας ήταν Ινδοί μετανάστες πρώτης γενιάς που διέμεναν στην Κρήτη (N=114). Διατυπώθηκε η υπόθεση ότι οι Ινδοί μετανάστες επιλέγουν την εναρμόνιση και τον διαχωρισμό, ως τακτικές επιπολιτισμού, δεδομένου ότι οι Ινδοί φέρουν διακριτές διαφορές από τους Έλληνες σε θρησκεία, πολιτισμικές αξίες και εμφάνιση, και η εναρμόνιση και ο διαχω-

ρισμός θα τους επέτρεπε να διατηρήσουν κάποια στοιχεία από τον πολιτισμό καταγωγής τους. Διατυπώθηκε, επίσης, η υπόθεση ότι η κοινωνική στήριξη θα δρα διαμεσολαβητικά στην αρνητική σχέση του διαχωρισμού και της εναρμόνισης με το άγχος και την κατάθλιψη. Επιπρόσθετα, διατυπώθηκε η υπόθεση ότι η κοινωνική στήριξη θα δρα προστατευτικά (δηλαδή θα δρα ως ρυθμιστής) στους Ινδούς μετανάστες που επιλέγουν την εναρμόνιση και τον διαχωρισμό, ελαττώνοντας τα επίπεδα άγχους και κατάθλιψης. Χρησιμοποιώντας συγκεκριμένες κλίμακες μέτρησης του άγχους, της κατάθλιψης, της κοινωνικής στήριξης και του επιπολιτισμού, τα αποτελέσματα έδειξαν ότι, όντως, οι Ινδοί μετανάστες επέλεξαν με μεγαλύτερη συχνότητα την εναρμόνιση και τον διαχωρισμό. Ο διαχωρισμός ήταν, επίσης, η μόνη τακτική επιπολιτισμού που συνδέονταν θετικά με την κοινωνική στήριξη και αρνητικά με την κατάθλιψη μέσω κοινωνικής στήριξης από φίλους και οικογένεια. Επιπλέον, τα υψηλά επίπεδα κοινωνικής στήριξης προστάτευαν τους μετανάστες που επέλεξαν την εναρμόνιση από την κατάθλιψη, ενώ τα μεσαία και υψηλά επίπεδα της αφομοίωσης από το άγχος. Τα αποτελέσματα αυτά υποδεικνύουν ότι και η εναρμόνιση και ο διαχωρισμός προτιμώνται από τους Ινδούς μετανάστες στην Ελλάδα. Επιπλέον, φαίνεται ότι στην περίπτωση των Ινδών μεταναστών την Ελλάδα, ο διαχωρισμός μπορεί να προσφέρει περισσότερη κοινωνική στήριξη σε σύγκριση με άλλες τακτικές επιπολιτισμού, έχοντας ως αποτέλεσμα λιγότερα συμπτώματα κατάθλιψης. Αυτά τα αποτελέσματα υποδεικνύουν ότι διαφορετικές τακτικές επιπολιτισμού μπορεί να έχουν διαφορετικά αποτελέσματα σε διακριτούς δείκτες ψυχικής υγείας. Επιπλέον, αναδεικνύεται ότι η κοινωνική στήριξη των μεταναστών αποτελεί προστατευτικό παράγοντα στη σχέση μεταξύ τακτικών επιπολιτισμού, άγχους και κατάθλιψης. Η αύξηση των κοινωνικών δικτύων των μεταναστών μπορεί να αποβεί χρήσιμη στην προσαρμογή τους στην ελληνική κοινωνία.

Λέξεις ευρετηρίου: Επιπολιτισμός, άγχος, κατάθλιψη, κοινωνική στήριξη, Ινδοί μετανάστες.

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