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Biculturalism as a Predictor of Empathy: The Mediating Role of Perspective-Taking

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Abstract

Research on bilingualism suggests that navigating multiple languages may confer advantages in perspective-taking and empathy. However, it remains unclear whether these associations reflect language experience or broader cultural experience. The present study examined whether biculturalism predicts affective empathy through perspective-taking, independent of bilingualism. Participants completed measures of biculturalism, perspective-taking, empathy, and communalism across three groups: bicultural bilinguals (n = 69), bicultural monolinguals (n = 108), and monocultural monolinguals (n = 105). Mediation analyses revealed significant indirect associations between biculturalism and empathy through perspective-taking among bicultural monolinguals and across the combined bicultural sample. Among bicultural bilinguals, communalism mediated the association between biculturalism and combined empathy outcomes. No significant effects emerged among monocultural monolinguals. Combined results were supportive of a broader cultural context having a significant impact on empathy, rather than bilingualism in and of itself.

Keywords: Bilingualism, biculturalism, communalism, empathy, perspective-taking

Being bilingual has long been associated with better cognitive functioning overall. When the seminal study by Goetz (2003) found support for a bilingual advantage in theory of mind (ToM) acquisition, it sparked wide-spread interest in replication, understanding why this advantage exists, and if an advantage may also exist for other related constructs. Specifically, bilingualism has been attributed to being advantageous for executive control (Antoniou et al., 2016) and attentional control (Arredondo et al., 2017), including better cognitive flexibility (Marzecová et al., 2013) and working memory (Morales et al., 2013).

General cognitive flexibility, and specific skills like perspective taking have been shown to facilitate other related constructs like affective empathy. Perspective taking refers to the ability to assign mental states to others (Frith & Frith, 2005). This has historically been associated and equated with ToM, or the ability to ascribe others' mental states and then use this information to interpret behavior (this has also been associated with the terminology, *cognitive empathy* and *mentalization*). Affective empathy, on the other hand, is the ability to share another's affect or mental state (Stietz et al., 2019). Perspective taking and affective empathy are distinct constructs with observably distinct neurological pathways (Stietz et al., 2019), and differential effects in real-world applications (Galinsky et al., 2008; Longmire & Harrison, 2018; Gilin et al., 2013), however, they are related, such that perspective taking has been shown to facilitate affective empathy (Lamm et al., 2010).

Studies have replicated findings that suggest bilingualism provides an advantage for perspective taking. The mechanisms for this relationship that are most generally supported include better metalinguistic and sociolinguistic awareness, both of which capture the capability to perspective-take and understand that others have differing viewpoints and contexts they are acting within; this is especially important for bilingual speakers who require knowledge of what

language others speak so as to use the appropriate language (Goetz., 2003; Yu et al., 2021). Moreover, investigators have proposed that bilinguals' better perspective-taking mediates a positive association between bilingualism and affective empathy (Jávor, 2016), consistent with the literature that demonstrates perspective taking facilitates affective empathy.

However, some findings question whether bilinguals actually possess a cognitive advantage. In the systematic review of studies investigating a bilingual cognitive advantage conducted by van den Noort et al. (2019), a mere 54.3% of the 46 studies reviewed found support for a bilingual cognitive advantage, with others reporting mixed or contradictory results in support of this effect. Such varying findings leave room for skepticism. Bilingualism itself may not be the primary driver for better perspective taking, or skills that can facilitate the development of other skills or functions such as affective empathy. One possibility is that learning to speak two languages often provides opportunities to practice navigating multiple semiotic systems.

Semiotic resources, or semiotic tools, are what we use to make meaning in communication with others and/or ourselves (Danielsson & Selander, 2021). When used systematically, these tools form toolkits or *semiotic modes* (code systems) for representational activities. Examples include language systems, but also writing systems, counting systems, and schematics such as maps or diagrams. Generally, these modes involve specific and nuanced linguistic, visual, audio, gestural, and spatial expression. A bilingual person may have opportunities to exercise multiple semiotic systems, language being only one. A bilingual person may also employ body language, intonation, facial expressions, and representations for time, emotions, directions, or counting that are specific to differing cultural norms, demonstrating their fluency in multiple semiotic systems beyond language. This ability to adapt to different contexts

and employ the appropriate semiotic systems inherently requires cognitive skills like perspective taking. This is also more precisely the ability of someone who is bicultural, not bilingual.

Biculturalism, or the mastery of multiple semiotic modalities unique to two cultures through significant exposure to both cultures, can even exclude mastery of language itself (as in the case where 2nd or 3rd generation immigrants may know very little of their family's heritage language, but grow up otherwise immersed in heritage cultural enclaves, practicing other culturally-specific multimodal semiotic systems). Through frame switching, biculturals can switch their use of multimodal semiotic systems between two cultural frameworks as appropriate for the context, demonstrating multimodal fluency across two cultures. Other investigators have suggested that this process of frame switching can be associated with positive effects on cognitive skills (West el al., 2017). The present study aims to disentangle the effects of multimodal bicultural fluency (biculturalism) from unimodal bilingual fluency (bilingualism) on cognitive skills that can facilitate constructs like affective empathy, or in other words, to understand if culture or language are responsible for these cognitive advantages. This can be observable if those who are bicultural, but not bilingual, demonstrate a cognitive advantage.

There is a gap in the literature understanding how cognitive mechanisms like perspective-taking may differ across cultural experiences in the same way they seem to across linguistic experiences. The present study explores if biculturalism is associated with empathy through perspective-taking, and whether this relationship is observed among individuals who are bicultural but monolingual. If biculturalism is associated with perspective-taking and empathy even in the absence of bilingualism, this would suggest that cultural experience may contribute to these relationships independently of language experience. In this way, the study aims to distinguish the potential contributions of bicultural experience from those of bilingualism and to

consider whether bilingualism may sometimes serve as an indicator of broader cultural experiences.

A competing hypothesis for why biculturals may predict empathy is that one or both of the cultures themselves encourage affective empathy. Bicultural individuals may internalize values from their cultural backgrounds that directly influence their empathetic responses. For example, Woods & Jagers (2003) explored the effect of communalistic cultural orientation on African American adolescent moral reasoning and found that communalism in African American youth positively predicted moral reasoning. Some cultural norms may emphasize affective empathy and prosocial behavior, leading biculturals to exhibit higher levels of affective empathy as measured by prosocial behavior regardless of their perspective-taking abilities.

To address the potential confound of a group orientation that emphasizes an "awareness of the fundamental interdependence of people…[with the] notion that duty to one's social group is more important than individual rights and privileges" (Boykin, 1997, p. 411), we included a measure of communalism and observed its role as an alternative mediator in the relationship between biculturalism and empathy. Support for this relationship would also provide the community clarity as to why findings on a bilingual cognitive advantage are inconsistent. Constructs like affective empathy, which appear to be mediated by skills requiring adept cognitive flexibility such as perspective taking, may be influenced by a broader cultural context that bilinguals are exposed to. If biculturalism can predict affective empathy through the mediation of communalism, this would suggest that cultural influences, rather than bilingualism itself, play a key role in affective empathy.

Purpose of the Current Study

Given the lack of literature regarding the relationship between biculturalism and affective empathy, the present study is exploratory in nature. We expected the bicultural and bilingual sample to predict affective empathy with perspective-taking as a mediator. We also expected that the monocultural and monolingual sample would not predict affective empathy. To explore if the multimodal construct of biculturalism, not bilingualism, would predict affective empathy, we examined a bicultural and monolingual sample. It was expected that even without bilingualism, biculturalism alone would predict affective empathy with perspective-taking as a mediator.

Method and Design

Design

A between-group design approach investigated the relationship between biculturalism and empathy as mediated by perspective-taking. Three conditions were observed: biculturals who are bilingual, biculturals who are monolingual, and non-biculturals who are monolingual. Participants were recruited from an online survey database, Cloud Connect Surveys, and were asked to complete an approximately 12-minute survey comprising four measures: biculturalism, perspective-taking, empathy, and communalism.

Sample

Both bicultural conditions consisted of Latine Americans, Asian Americans, and African Americans. European Americans were recruited for the non-bicultural condition. All participants were over 18 years of age. Besides having fluency in English, bilingual participants learned their other respective languages during childhood, defined in the survey as 0-12 years of age. Of the bicultural/bilingual sample (n = 69), 31 were female and 1 was nonbinary, of the bicultural/monolingual sample (n = 108) 52 were female, and of the monocultural/monolingual sample (n = 105) 46 were female.

Measures

Biculturalism

Biculturalism was measured using an adapted scale from the validated Mexican-American Biculturalism Scale (MABS; Basilio et al., 2014), consisting of 27 items that capture bicultural comfort, facility, and advantages subscales. The scale demonstrates good reliability and validity in prior research (Basilio et al., 2014).

Perspective-taking

Perspective-taking was measured using the third-order false-belief task (FBT3) (Valle et al., 2015). This task consists of both first- and second-order false-belief tasks, in which subjects have to attribute a cause to a character's behavior to their mental state following a story about three brothers playing with a ball. Another measure of perspective-taking used was the perspective-taking (PT) scale: a 7-item subscale adapted from the Interpersonal Reactivity Index (Davis, 1980, 1983). This scale measures the reported tendency to adopt the psychological point of view of others in day-to-day life.

Empathy

Prosocial behavior was measured using the Prosocial Tendencies Measure (PTM; Carlo & Randall, 2002). This scale consists of items that measure six forms of prosocial tendencies. Another measure of empathy was empathetic concern, using the empathetic concern (EC) scale: a 7-item subscale adapted from the Interpersonal Reactivity Index (Davis, 1980, 1983).

Communalism

Participants' group orientation was assessed using a revised Communalism scale, validated by Grayman-Simpson & Mattis (2005). This scale consists of 18 items, taken from the original Communalism scale created by Boykin et al. (1997).

Data Analysis

Cronbach's alpha was used to test the internal reliability of biculturalism, perspective-taking, empathy, and communalism measures. Mediation effects were analyzed using Sobel's test and bootstrapping for 1000 iterations, with biculturalism as the predictor, perspective-taking as the mediator, and the measures of empathy (prosocial behavior, empathetic concern, and a combined prosocial behavior + empathetic concern variable) as the dependent variable for each condition. Communalism was evaluated as an alternative mediator for all conditions.

When analyzing the mediation analyses, we examined the direct and indirect effects. The notion that a significant direct effect is necessary to establish mediation was initially introduced by Baron and Kenny (1986) in their causal steps approach. However, more recent literature suggests this technique is antiquated, indicating that a significant mediation occurs even if the direct path (path c') is not significant as long as the indirect effect (paths a and b) is significant (Zhao et al., 2010; Hayes, 2013; Memon et al., 2018). Specifically, Zhao et al. (2010) propose three types of mediation:

1. Complementary mediation: Mediated effect (a x b) and direct effect (c') both exist and point in the same direction.
2. Competitive mediation: Mediated effect (a x b) and direct effect (c') both exist and point in opposite directions.
3. Indirect-only mediation: Mediated effect (a x b) exists, but no direct effect (c').

The researchers also propose two kinds of non-mediation:

1. Direct-only non-mediation: Direct effect (c') exists, but no indirect effect.
2. No-effect non-mediation: Neither the direct effect (c'), nor indirect effect exists.

The current study will use the classification system proposed by Zhao et al. (2010) to identify the significance and type of mediation demonstrated.

Results

All measures were assessed for internal reliability. Biculturalism demonstrated good internal reliability, (α = .93). Both measures of empathy, prosocial behavior and empathetic concern, demonstrated acceptable internal reliability (α = .75; α = .84). The first measure of perspective-taking, the adapted third-order false-belief task (FBT3) (Valle et al., 2015), demonstrated a floor effect such that the mean score across all participants was only 38.9%. However, the perspective-taking (PT) subscale adapted from the Interpersonal Reactivity Index (Davis, 1980, 1983), demonstrated good internal reliability (α = .77) and was thus used for all mediation models in which perspective-taking was the proposed mediator. Communalism also demonstrated good internal reliability (α = .87).

Across the three groups, the mean values of biculturalism did not vary significantly. For bicultural bilinguals, we observed a mean bicultural score of 4.01 (*SD* = 0.60). For bicultural monolinguals, we observed a mean bicultural score of 3.93, (*SD* = 0.58). For monocultural monolinguals, we observed a mean bicultural score of 3.86, (*SD* = 0.66). Although these scores of biculturalism do not vary significantly across groups, initially suggesting the measure did not adequately capture differences in bicultural experience between all groups, the mediation models' results demonstrate a differential predictive utility of biculturalism as a scale across groups.

Monocultural Monolinguals

As predicted by our hypotheses, there were no significant indirect or direct effects of biculturalism on any measures of empathy for the monocultural monolinguals (Table 1).

Bicultural Bilinguals

The bicultural bilingual condition showed a significant direct effect of biculturalism on prosocial behavior (p = .033, CI = .03, .38), which suggests that in this condition, biculturalism was predictive of this measure of empathy (Table 2). Unexpectedly, there was no significant indirect effect of biculturalism on measures of empathy when considering perspective-taking as the mediator (Table 2). There was, however, a significant indirect effect of biculturalism on prosocial behavior + empathy when considering communalism as the mediator (p = .030, CI = .06, .41), suggesting that communalism in this condition acted as an indirect-only mediator in the relationship between biculturalism and empathy.

Bicultural Monolinguals

For the bicultural monolingual condition, there was no direct effect of biculturalism on prosocial behavior, but there was a significant direct effect of biculturalism on empathetic concern (p < .001, CI = -.66, -.15) and a combined prosocial behavior + empathetic concern variable (p < .011, CI = -.37, -.04) when perspective-taking was included as a mediator (Table 2). This initially demonstrated an unexpectedly significant negative relationship between biculturalism and two measures of empathy. However, there were significant and positive indirect effects of biculturalism on empathetic concern (p = .001, CI = .12, .34), prosocial behavior (p < .001, CI = .01, .12), and prosocial behavior + empathetic concern (p < .001, CI = .07, .22), when perspective-taking was included as a mediator. Thus, even without bilingualism, biculturalism was predictive of affective empathy in the same mediation model wherein bilingualism has been historically investigated as a predictor. Biculturalism, absent of bilingualism, was predictive of affective empathy with perspective-taking as the mediator.

Perspective-taking had a competitive mediation on biculturalism's relationship to empathetic concern and the combined variable of prosocial behavior + empathetic concern.

Communalism played no significant role as a mediator between biculturalism and prosocial behavior + empathetic concern, demonstrating that among the mediators investigated, perspective-taking facilitates these mediating effects among monolingual biculturals.

All Biculturals

A final mediation analysis was performed for all biculturals, regardless of bilingual status. No direct effects of biculturalism on any measures of empathy were observed (Table 4). In line with our hypothesis, significant indirect effects of biculturalism on empathy were demonstrated for all measures of empathy, including empathetic concern (p = .006, CI = .06, .28), prosocial behavior (p = .006, CI = .02, .11), and prosocial behavior + empathetic concern (p < .003, CI = .045, .19) (Table 4).

Thus, perspective-taking demonstrated an indirect-only mediation on biculturalism's relationship with empathy, consistent with the hypothesized theoretical framework. When communalism was assessed as the mediator between biculturalism and prosocial behavior + empathetic concern, there was no significant indirect or direct effect shown, demonstrating that among the mediators investigated, perspective-taking facilitates these mediating effects.

Discussion

Combined results supported a broader cultural context significantly impacting affective empathy rather than bilingualism alone. When bicultural individuals shift between and adapt to different cultural environments, they also adjust multimodal semiotics to aid communication with others. While language commonly acts as a stand-in for culture, given it is one among an array of semiotic systems, these observations highlight that it is not just language, but rather culture as a whole (encompassing multimodal semiotics) that affects affective empathy outcomes.

As anticipated, there were no significant indirect or direct effects of biculturalism on any measures of empathy for the monocultural monolinguals. Given the selected monoculturals were anticipated to have the least amount of personal experience with biculturalism, their biculturalism was not expected to predict measures of empathy.

We observed that for those who were bicultural and bilingual, there was a significant direct effect of biculturalism on prosocial behavior, but no significant indirect effect of biculturalism on measures of empathy when perspective-taking was evaluated as a mediator. It is possible the sample size (n = 69) was too low to provide enough statistical power to demonstrate perspective-taking as a mediator (Fritz & MacKinnon, 2007). This sample also had the most unequal distribution of bicultural groups, such that only six participants identified as African American. This imbalance in demographics could have influenced the findings, potentially limiting the generalizability of the results across diverse bicultural populations. However, we did find a significant indirect effect of biculturalism on prosocial behavior and empathy when evaluating communalism as the mediator. This suggests that cultural values emphasizing group cohesion, shared responsibility, and interdependence may play a role in shaping prosocial behaviors and affective empathy.

To further understand if bilingualism has been acting as a proxy for biculturalism, we observed a bicultural and monolingual sample. It was expected that without bilingualism, biculturalism would predict affective empathy with perspective-taking as a mediator. We found that perspective-taking acted as a competitive mediator on biculturalism's relationship with empathetic concern and the combined variable of prosocial behavior + empathetic concern. We also observed that there were significant and positive indirect effects of biculturalism on all measures of empathy when perspective-taking was evaluated as a mediator: empathetic concern,

prosocial behavior, and prosocial behavior + empathetic concern. Communalism was not found as a significant mediator between biculturalism and prosocial behavior + empathetic concern, suggesting that cognitive mechanisms rather than cultural values drive these effects. These findings establish that biculturalism, even in the absence of bilingualism, is a significant predictor of affective empathy. In the same mediation model where bilingualism has traditionally been examined, biculturalism alone demonstrated a comparable predictive role, with perspective-taking serving as the key mediating factor.

The final mediation analysis, which examined all biculturals regardless of bilingual status, revealed no direct effects of biculturalism on any measures of empathy. However, as hypothesized, significant indirect effects emerged across all empathy measures, including empathetic concern, prosocial behavior, and the combined prosocial behavior + empathetic concern variable. These findings support the hypothesis that biculturalism can predict affective empathy through cognitive mechanisms like perspective-taking, which may be strengthened by the robust experience of navigating multimodal cultural frameworks.

Conclusion

Currently, there exists a gap in the literature observing how cognitive mechanisms like perspective-taking may differ across cultural experiences in the same way they seem to across linguistic experiences. By examining the relationship between biculturalism and empathy and comparing it to the relationship between bilingualism and empathy, this research captured the experiences of many who live and grow up in diverse environments who may not necessarily have a bilingual expertise to show for it, but do have a mastery of the semiotic mechanisms of two or more cultures. This research is the first of its kind; it highlights a kind of invisible, easily ignored skillset that is often laborious, and rightfully recognizes how it is an innate strength of

those who possess it. This inclusion is relevant and crucial when discussing the experiences of those who grew up and currently reside in the United States, which houses an ever-growing population of migrants and diverse cultures. This research applies to the lived experiences of African Americans, first, second, and third-generation (and onward) children who fluently move between cultures, even if not fluent in multiple languages.

Moreover, there is a lack of consistent empirically supported explanations for why linguistic experiences impact cognitive skills and constructs like empathy. These findings highlight an inherent misunderstanding of what construct may be at play, suggesting a fundamental misinterpretation of the underlying factors driving differences in these abilities. These findings challenge the assumption that bilingualism alone predicts variations in cognitive skills, suggesting instead that bilingualism has been used as a proxy for biculturalism. This study is exploratory in nature; although the findings demonstrate initial support that perspective-taking plays a salient role in the mediation between biculturalism and empathy, future studies should investigate other possible mediators that reflect mastery of cultural adaptation more broadly.

Statements and Declarations

Author Contributions

Conceptualization: RG and EH; Methodology: RG; Formal analysis and investigation; RG; Writing - original draft preparation: RG; Writing - review and editing: EH; Resources: RG and EH; Supervision: EH

Data Availability

De-identified individual participant data will be made available in addition to the informed consent form. The data will be made available upon publication to researchers who provide a methodologically sound proposal for use in achieving the goals of the approved proposal. Proposals should be submitted to rgga2020@mymail.pomona.edu.

Funding and Competing Interests

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Ethics Approval

The institution's Institutional Review Board (IRB) provided approval for research with human participants.

Consent to Participate

Informed consent was obtained from all participants.

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Tables

Table I.

Mediation Analyses for Monocultural Monolinguals

Dependent Variable = Prosocial Behavior						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Prosocial	.030	-.007	.109	1.21	.225
Direct	Biculturalism → Prosocial	.071	-.068	.217	1.26	.206
Total	Biculturalism → Prosocial	.074	-.031	.260	1.70	.089
Dependent Variable = Empathy						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Empathetic Concern	.080	-.019	.310	1.47	.141
Direct	Biculturalism → Empathetic Concern	.096	-.218	.168	-.146	.884
Total	Biculturalism → Empathetic Concern	.132	-.139	.374	.787	.432
Dependent Variable = Prosocial Behavior + Empathy						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Prosocial + Empathetic Concern	.051	-.006	.186	1.52	.130
Direct	Biculturalism → Prosocial + Empathetic Concern	.073	-.099	.181	.520	.603
Total	Biculturalism → Prosocial + Empathetic Concern	.094	-.064	.309	1.23	.219

*$p < .05$. **$p < .01$

Table II.

Mediation Analyses for Bicultural Bilinguals

Dependent Variable = Prosocial Behavior						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Prosocial	.049	-.027	.168	1.26	.209
Direct	Biculturalism → Prosocial	.088	.029	.376	2.13	.033*
Total	Biculturalism → Prosocial	.098	.075	.461	2.54	.011*
Dependent Variable = Empathy						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Empathetic Concern	.097	-.050	.341	1.12	.261
Direct	Biculturalism → Empathetic Concern	.160	-.118	.505	1.29	.198
Total	Biculturalism → Empathetic Concern	.150	.025	.612	2.10	.035*
Dependent Variable = Prosocial Behavior + Empathy						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Prosocial + Empathetic Concern	.075	-.030	.254	1.13	.258
Direct	Biculturalism → Prosocial + Empathetic Concern	.116	-.060	.417	1.70	.089

Total	Biculturalism → Prosocial + Empathetic Concern	.114	.080	.522	2.47	.014*

*$p < .05$. **$p < .01$

Table III.

Mediation Analyses for Bicultural Monolinguals

Dependent Variable = Prosocial Behavior						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Prosocial	.029	.008	.120	1.98	.048*
Direct	Biculturalism → Prosocial	.071	-.146	.141	-.149	.881
Total	Biculturalism → Prosocial	.069	-.082	.198	.667	.505
Dependent Variable = Empathetic Concern						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Empathetic Concern	.055	.122	.342	3.92	< .001**
Direct	Biculturalism → Empathetic Concern	.126	-.663	-.155	-3.31	< .001**

Total	Biculturalism → Empathetic Concern	.136	-.473	.068	-1.47	.142
Dependent Variable = Prosocial Behavior + Empathetic Concern						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Prosocial + Empathetic Concern	.037	.073	.215	3.66	<.001**
Direct	Biculturalism → Prosocial + Empathetic Concern	.084	-.373	-.038	-2.54	.011*
Total	Biculturalism → Prosocial + Empathetic Concern	.088	-.243	.106	-.871	.384

*$p < .05$. **$p < .01$

Table 4.

Mediation Analyses for All Biculturals

Dependent Variable = Prosocial Behavior						
			95% Confidence Interval			
Effect	Path	SE	Lower	Upper	Z	p
Indirect	Biculturalism → PT → Prosocial	.022	.021	.107	2.72	.006*
Direct	Biculturalism → Prosocial	.057	-.046	.181	1.21	.227
Total	Biculturalism → Prosocial	.058	.018	.247	2.25	.024*
Dependent Variable = Empathetic Concern						
			95% Confidence Interval			

Effect	Path	SE	95% Confidence Interval		Z	p
			Lower	Upper		
Indirect	Biculturalism → PT → Empathetic Concern	.056	.060	.282	2.77	.006*
Direct	Biculturalism → Empathetic Concern	.117	-.380	.085	-1.25	.212
Total	Biculturalism → Empathetic Concern	.109	-.193	.245	.095	.924
Dependent Variable = Prosocial Behavior + Empathetic Concern						
Effect	Path	SE	95% Confidence Interval		Z	p
			Lower	Upper		
Indirect	Biculturalism → PT → Prosocial + Empathetic Concern	.037	.045	.187	2.92	.003*
Direct	Biculturalism → Prosocial + Empathetic Concern	.077	-.197	.108	-.498	.619
Total	Biculturalism → Prosocial + Empathetic Concern	.074	-.076	.211	.951	.342

*$p < .05$. **$p < .01$