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Time to Stop Worrying: A Correlational Study on Individualist Versus Collectivist Time Perspectives and Anxiety

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Cover Page Footnote

I would like to thank my mentor, Dr. Kristian Veit, for his wisdom, insight, and direction as I took on a project of this scale. His instruction equipped me to read, analyze, and interpret data independently; I know this skill will be beneficial to me throughout the rest of my life. More than this, I would like to thank him for the encouragement he provided when I needed it most. I am thankful to have gotten the opportunity to learn and grow in an environment such as Olivet's where I was surrounded by compassion, challenged to be my best, and extended grace in my shortcomings. I would also like to thank the Olivet Honors Program for funding this project, as well as their faculty for their dedication to my success and aid in this project's completion. Additional thanks to my beloved family and friends for their interest in and support of this project.



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ABSTRACT

Purpose

Research has indicated a significant relationship between anxiety and time perspective (TP), which is the way one views life in terms of the past, present or future. TP is broken down into five facets based on the Zimbardo Time Perspective Inventory (ZTPI), including past negative (PN), past positive (PP), present fatalistic (PF), present hedonistic (PH), and future (F) time perspectives (Zimbardo & Boyd, 1999). Time perspective is thought to be impacted by one's culture, although there is a lack of representation in studies on TP cross-culturally, which makes it difficult to generalize. In order to add to the research on time perspective's relationship to anxiety and to fill the gap on the role of culture in this phenomenon, the variable of individualism was included in this present study.

Procedure

A total of 525 participants were obtained from 22 countries including the United States, India, Brazil, Canada, and the United Kingdom. Upon confirmation of informed consent, we distributed a survey to participants measuring each individual on time perspective, using the ZTPI; individualism, using the Individualism and Collectivism scale (Singelis et al., 1995); and anxiety, using a subcategory of the Sixteen Personality Factor Questionnaire (Goldberg et al., 2006).

Results

We found that individualism showed a positive relationship with F and collectivism showed a positive relationship with PP. Individualism, but not collectivism, correlated positively with anxiety. Lastly, correlations between PN and PF resulted in positive, significant relationships with anxiety and correlations between PP and F resulted in negative, significant relationships with anxiety. Interestingly, PH showed a significant positive relationship to anxiety, which was the opposite of what was hypothesized. This would be a variable to consider for further research.

Conclusion

These results suggest one's outlook on time plays a role in psychological well-being. Implications on culture's role in this phenomenon have also been strengthened by these findings. Though continued study is merited, this information further validates the value that time perspective has in developing interventions for emotional disorders such as anxiety.

Keywords: time perspective, individualism, collectivism, anxiety, cross-cultural

INTRODUCTION

Time perspective has increasingly been seen to play a central role in many domains of psychology. This present research intends to explore three major variables including time perspective, level of individualism versus collectivism, and anxiety. The sample population anticipated for this study will include participants of various places of

origin, including the individualist United States, collectivist Brazil, and moderate India, to gather a sufficient amount of data on what time perspectives are predominant in participants that are more individualistic or collectivistic. Furthermore, we will investigate how these constructs are related to anxiety.

REVIEW OF LITERATURE

Time perspective

Time perspective (TP) is the subjective view an individual maintains towards experiences, which are presented through their predominant orientation (Zimbardo & Boyd, 1999). In other words, time perspective focuses on whether one views life in terms of the past, present or future and how this may impact daily functioning. This perception has a direct influence on goals, decisions, and behaviors (Akirmak, Tuncer, Akdogan, & Erkat, 2019; Kolesovs, 2005; Shirai & Beresnevicene, 2005; Sircova et al., 2015). TP is composed of five factors, as outlined by the most common inventory of TP, the Zimbardo Time Perspective Inventory (ZTPI). These five factors are past positive (PP), past negative (PN), present hedonistic (PH), present fatalistic (PF), and future (F) (Zimbardo & Boyd, 1999). PP looks at the past nostalgically and pleasantly, whereas PN looks at the past with remorse. PH individuals enjoy the present pleasures and sensations while giving little regard to future consequences. PF is indicative of a person who exhibits a feeling of lack of control and hopelessness when viewing the events of the future. F orientation of time is displayed through care and planning for the future by setting goals and trusting they will reach them. Past research has indicated that an inclination toward one TP over others is influenced by a multitude of factors, such as family, education, and culture (Zimbardo & Boyd, 1999); however, little attention has been devoted to particular aspects of culture and their impact on the diversity of temporal orientations (Fulmer, Crosby, & Gelfand, 2014). Specifically, collectivism and individualism have been shown to influence cross-cultural differences in an orientation toward the past, present, and future (Fulmer et al., 2014). Furthermore, TP has been correlated with different facets of well-being and psychological traits such as anxiety, as discussed in more detail below. (Drake et al., 2008; Papastamatelou, Athanasiadou, & Unger, 2015; Sobol-Kwapinska, 2016; Triandis, 2001; Tseferidi, Griva, & Anagnostopoulos, 2017; van Beek, Berghuis, Kerkhof, & Beekman, 2010; Wu, Zhou, Zhao, Qiu, & Guo, 2019).

Individualism vs collectivism

Individualist cultures are those in which individuals feel self-reliant and dependent on their own assets. These cultures are often faster paced and put more emphasis on individual achievement over social affiliation (Levine & Norenzayan, 1999). Collectivist cultures are centered around a broader community and work towards the good of a society as a whole, rather than a singular individual. These cultures are interdependent and value compromise as part of common practice (Tafarodi & Swann, 1996). That said, it cannot be assumed that all individuals from a predominantly individualist or collectivist culture share all the characteristics of these cultures at all times. In fact, there is a continuum of individualism where people tend to fall to one side of the spectrum over the other depending on the situation (Triandis, 2001). The basis

on which we develop our hypotheses on whether countries are more individualistic or collectivistic come from findings of Geert Hofstede, a pioneer researcher on cultural differences, in his Individualism Index breakdown (Hofstede et al., 2010). In this index, on a scale of 0 to 100, the US scores a 91 on individualism, which is among the topmost individualistic countries. India scores a 48, which is at the midpoint of the spectrum, meaning it shares both individualist and collectivistic traits. Brazil scores a 38, which makes it less collectivistic than many other Latin American countries, but still qualifies it as being more collectivistic than individualistic. Canada scores an 80 and the UK scores 89, which indicates these are both high on spectrum of individualism (Hofstede, n.d.).

Anxiety

Anxiety is characterized by a persistent state of worry or fear (Wu et al., 2019). There are two main categories of anxiety, one being state anxiety and the other being trait anxiety. State anxiety is a more transitory reaction to an unfavorable event. Trait anxiety is characteristic of an individual with anxiety as a personality dimension. Someone with this form of anxiety is faced with negative emotions across many situations and frequently (Wu et al., 2019). Throughout this study, it should be assumed that where anxiety is mentioned as a variable, we are referring to trait anxiety. The World Health Organization reports that globally, 1 in 13 people suffer from anxiety; further research, therefore, should be done to better understand the underlying factors that may be driving this malady.

Time perspective and individualism v. collectivism

Previous research on cross-cultural time perspectives has led to the belief that individualism and collectivism play a role in people's orientation towards the past, present, or future. A future temporal orientation has been seen in Western, individualist cultures where there is an emphasis on one's ability to attain future goals and live competitively (Shirai & Beresneviene, 2005). In contrast, collectivist cultures, including some Asian cultures, tend to live in the moment and give less thought to events in the future (Brislin & Kim, 2003). Other effects of temporal orientation have been seen in attention given to background and context. Fulmer, Crosby, and Gelfand (2014) found that Chinese may hold tighter to the past as background and context for the present, therefore orienting themselves to the past and present. Westerners, on the other hand, feel they have the ability to control what is to come, therefore orienting themselves towards the future. The way time is experienced and conceptualized varies greatly among individualist versus collectivist cultures. However, little attention has been given to the impact of the diversity in TP across cultures (Fulmer et al., 2014). No research studies to our knowledge have looked at the correlations between the five facets of the ZTPI and individualism or collectivism. This adds to the value of further study.

Time perspective and anxiety

As mentioned previously, there are five factors to time perspective, as identified by Zimbardo and Boyd's (1999) ZTPI, and each has a unique relationship to the different variables that researchers have correlated them with. It has been demonstrated that specific factors of TP, namely PN and PF, have been correlated negatively with well-

being and positively with anxiety (Drake et al., 2008), yet caution must be taken in generalizing these results due to the sample population mainly being made up of college students from a single university in the United Kingdom. Sobol-Kwapinska (2016) studied the relationship between TP and well-being following previous research that suggested temporal orientations influence the feelings individuals have towards life events. Results of this study showed that both PH and PF time perspectives correlated negatively with emotional stability. PN correlated positively with neuroticism, depression, fear, problems in social relations, gambling, negative mood, low self-esteem, and propensity for addiction.

This is partially consistent with Papastamatelou, Athanasiadou, and Unger's (2015) correlational study in which results showed PN and PF perspectives were associated with poor well-being and anxiety; these findings, however, should be taken lightly due to poor representation. The sample population was made up entirely of residents of Greece. Wu and researchers (2018) had a similar correlational study including the analysis of neural mechanisms in brain scans and the concept of a balanced time perspective (BTP). BTP is described as "a mental ability that empowered individuals to be flexible with the employment of their time perspectives, rather than being biased towards a specific time perspective regardless of task, features, situational considerations and personal resources" (Zimbardo & Boyd, 1999; Wu et al., 2018). An individual's level of BTP is measured by finding the deviation of their score on each dimension on the ZTPI and the optimal score for each dimension (Stolarski, 2016); overall, it is a measure of an individual's self-regulation of time perspective. Individuals with BTP had a greater ability to regulate their emotion, and had fewer negative moods such as tension, stress, and anxiety (Wu et al., 2018). The behavioral and neuroimaging facets of the aforementioned study suggested that emotional regulation is a critical component of therapy for anxiety disorders. Emotional intelligence was found to be positively associated with PP, PH, and F, and negatively associated with PN and PF (Wu et al., 2018). An unbalanced TP is associated with higher levels of anxiety, suggesting that individuals who associate highly with one dimension of the ZTPI (particularly PN and PF) may be at a higher risk for trait anxiety (Wu et al., 2018).

Tseferidi, Griva, and Anagnostopoulos (2017) found that previous research indicated that perceptions of the past, present, and future can affect well-being. This led them to hypothesize that subjective well-being (operationalized as higher life satisfaction scores and lower anxiety and depression scores) will show a positive correlation with PP, PH, and F, and a negative correlation with PN and PF. The findings showed that PN and PF had a significantly positive association with anxiety at a p-value of 0.001. These results are consistent with another study done in a psychiatric context by van Beek and researchers (2010). The study previously mentioned, by Tseferidi and colleagues (2017), supports the idea that well-being and TP are related, while adding to the necessity for replication due to its sample population being entirely made up of Greek citizens. There have been multiple implications that time perspective is relevant to clinical and counseling settings (Sircova et al., 2015; Tseferidi et al., 2017; van Beek et al., 2010), and continued research intends to contribute to the literature on TP as an indicator of well-being, as measured through anxiety.

Significance

When it comes to the influence a cultural aspect, such as individualism, has on an individual’s time perspective, there is a lack of robust information. This information would serve useful in growing the body of research on forces that act on one’s level of anxiety, an ailment that plagues our society. Each of these three variables seem to be interconnected, since much of past research indicates anxiety and time perspective are correlated; additionally, people who are more or less individualistic tend to lean towards one particular time perspective. In order to enrich the empirical findings on time perspective, culture should be incorporated into the understanding of the nature and origin of temporal dimensions (Fulmer et al., 2014). In order to have reliable and valid results in a study of this nature, it is crucial that the population samples are well-rounded and representative of the world’s population as a whole. Yet, past research on time perspective has failed to accomplish this (Akirmak et al., 2019; Fulmer et al., 2014; Sircova et al, 2015; Tseferidi et al., 2017). Some past studies have also indicated a need to increase awareness of time perspective therapy in treating negative emotions (Wu et al., 2018). A greater effort should be made in incorporating time perspective evaluations into clinical settings as it has shown profound implications for intervention of emotional disorders. It has been reported by 75% of participants in a study of time perspective therapy (TPT) that there was an overall reduction of anxiety symptoms (Wu et al., 2018). Van Beek and researchers (2011) found that the ZTPI is effective for diagnosis and intervention of psychopathological disorders, including anxiety. If these findings can be expanded upon through this present study, the validity of these claims would strengthen.

HYPOTHESES

The aim of the present study is to correct the lack of representation in past research and contribute to the understanding of time perspective as a factor of anxiety. The summation of past relevant research leads us to the following hypotheses: Individualistic participants will have a future time perspective, whereas collectivistic participants will have a past time perspective. Additionally, participants with a tendency towards individualism will display a higher level of anxiety than participants with a tendency towards collectivism. When considering the facets of time perspective and anxiety, it is hypothesized that anxiety will show a positive correlation with past negative time perspective and present fatalistic time perspective, but anxiety will show a negative correlation with past positive time perspective, present hedonistic time perspective, and future time perspective.

METHODOLOGY

Participants

The initial number of participants involved in this study was 646 people. After filtering out individuals who had failed the discrimination items, or who did not meet the age requirement of 18 years, we were left with a final number of 525 participants. This pool of people was made up of individuals from the United States (*N* = 361), India (*N* = 125), Brazil (*N* = 9), Canada (*N* = 9), the United Kingdom (*N* = 4), and an assemblage

of other countries (*N* = 17). As mentioned before, all participants were required to be above the age of 18, as well as speak the English language. The average age of participants was 34.6 years with a range of 64 years. The gender of participants was broken up as 52.1% male and 47.9% female, with all but one participant disclosing this information. 55.2% of individuals were White, and the other 44.8% of participants identified their ethnicity as American Indian/Alaska Native, Asian, Black or African American, Hispanic, Latino or Spanish Origin, Middle Eastern or North African, or Other. No participants identified as Native Hawaiian or Other Pacific Islander (see **Table 1**). Participants were obtained through Amazon Mechanical Turk, a system that allows individuals from all over the world to complete virtual tasks. Participants received a compensation of \$.40 for completing the survey.

TABLE 1

Frequencies of Ethnicity		
Ethnicities	Frequency	% of Total
American Indian/Alaska Native	12	2.3 %
Asian	162	30.9 %
Black or African American	26	5.0 %
Hispanic, Latino or Spanish Origin	27	5.2 %
Middle Eastern or North African	1	0.2 %
White	289	55.2 %
Other	7	1.3 %

Note: No participants identified as Native Hawaiian or Other Pacific Islander

Materials

Each of the variables within this study are operationally defined by scores obtained on each relevant scale. Time Perspective contains five components (past positive, past negative, present hedonistic, present fatalistic, and future) with individuals receiving a score on each component following completion of the Zimbardo Time Perspective Inventory (ZTPI) (see Appendix A; Zimbardo & Boyd, 1999). The ZTPI is made up of 56 items that are answered based on a 5-point Likert scale in which statements are rated based on a spectrum of 1 = “very untrue” to 5 = “very true.” The ZTPI has been characterized as the “gold standard” for research on time perspective and cross-cultural comparisons (Sircova et al., 2015) and its test-retest reliability measures within the range of 0.70 to 0.80 for each of the five factors. Factor analyses on the ZTPI shows significant relationships between each factor and the items they were expected to represent. Additionally, confidence in the convergent and discriminant validity of the ZTPI was ensured following extensive validity tests run by Philip Zimbardo (Zimbardo & Boyd, 1999). Two sample items from the ZTPI include “I believe that a person’s day should be planned ahead each morning” and “I do things impulsively” (see Appendix A for full list). Individualism and collectivism were measured using the Individualism and Collectivism Scale (INDCOL), which is designed to measure four dimensions of individualism and collectivism including vertical and horizontal

individualism and vertical and horizontal collectivism (see Appendix B; Singelis et al., 1995). For the nature of our study, these four dimensions were condensed into two dimensions (individualism and collectivism). This scale consists of 16 items measured on a 9-point Likert scale ranging from 1 = “never” or “definitely no” to 9 = “always” or “definitely yes.” The INDCOL has a test-retest reliability between 0.62 and 0.70, as well as a Cronbach’s alpha between 0.46-0.7, making it considerably reliable (Hui, 1988). Two sample items from the INDCOL include “It is important that I do my job better than others” and “To me, pleasure is spending time with others.” Finally, anxiety is measured through the 10-item International Personality Item Pool (IPIP) representation of The Sixteen Personality Factor Questionnaire (16 PF) relating explicitly to trait anxiety (see Appendix C; Goldberg et al., 2006). The items on this scale are answered according to a 5-point Likert scale in which statements range on a spectrum from 1 = “strongly disagree” to 5 = “strongly agree.” The 16 PF reliability coefficients range from 0.56-0.79, and it has a Cronbach’s alpha for internal consistency at an average of 0.74 (Rivera, 1996). An example item from the 16 PF anxiety scale is “I am afraid that I will do the wrong thing.” Each of the scales used in the present study have been widely used to operationalize the variables being measured.

Procedure

Upon approval from Olivet Nazarene University’s Institutional Review Board, data collection began through Amazon Mechanical Turk, the host site for the survey. Upon entering the survey, each participant received thorough instructions and an outline of the study on the first page. This included an informed consent document, which detailed the nature and purpose of the project, an explanation of the scales used, any possible discomfort or risks, the benefits to participation, and the confidentiality measures put in place. Each participant was also notified of their right to withdraw from the study at any point with no penalty. The contact information for the researcher, advisor, and Institutional Review Board were included in the case of any concerns or feedback. In order to proceed through the survey, the participant was required to check a box indicating they have read and agreed to the conditions of the study. The scales used to measure the variables of time perspective, individualism, collectivism, and anxiety proceed in the following order, the ZPTI, the INDCOL, and then the 16 PF. We attempted to control for dissimulation and response bias by reverse coding certain survey statements and including discrimination items (nonsense items that anyone could answer if they are paying attention). An example of one of these items is “For this response, select ‘always.’”

The survey also collected demographic information including age, gender, ethnicity, and country of origin, as well as any additional countries the individual has lived for at least six months. This last piece of information offered a more well-rounded understanding of what cultures (predominantly individualist or collectivist) have influenced the individual’s time perspective and level of individualism or collectivism (Zimbardo & Boyd, 1999). The four sections of the survey were estimated to take about fifteen minutes to complete.

Descriptive statistics were measured through Jamovi, a statistics software program.

Following this, each of the correlations being measured, as noted in our hypothesis, were determined through Pearson correlations.

RESULTS

Included in the methodology are the descriptive statistics of the 525 participants involved in the survey. The mean score for the United States on individualism was 47.6 and on collectivism was 51.2. The mean score for India on individualism was 52.8 and on collectivism was 54.2. The mean score for Brazil on individualism was 45.3 and on collectivism was 51.3. The mean score for Canada on individualism was 55.4 and on collectivism was 52.3. The mean score for the United Kingdom on individualism was 54.9 and on collectivism was 58.5 (see **Table 2**). Many of these scores remain moderate. An interesting finding is that of the level of individualism in the United States versus India. The United States is noted by Hofstede’s research to be highly individualistic, yet moderate India was found to have a higher score. A possible explanation for this is that the United States is known as a melting pot of many different cultures, so there may have been other influencing factors on these individuals. We must also keep in mind that it is difficult to study entire societies, and it is not unique to be presented with different findings when researched by different researchers (Hofstede, n.d.).

TABLE 2

Descriptive statistics for INDCOL results for each country										
	US		India		Brazil		Canada		UK	
	IND	COL	IND	COL	IND	COL	IND	COL	IND	COL
<i>N</i>	361	361	125	125	9	9	9	9	4	4
Mean	47.6	51.2	52.8	54.2	45.3	51.3	55.4	52.3	54.0	58.5
Median	48	52	53	54	46	50	55	53	52	58.5
Standard Deviation	9.38	11.2	8.09	8.20	5.92	6.54	8.14	10.4	6.16	3.51
Variance	87.9	125	65.5	67.2	35.0	42.8	66.3	109	38.0	12.3
Range	51	64	37	43	19	20	21	33	14	7

Note: INDCOL = Individualism and Collectivism Scale,
IND = Individualism, COL = Collectivism

The first question we sought to answer was whether individualistic and collectivistic participants have a predominant time perspective. It was predicted that participant scores on the individualism measure would have a positive relationship with future time perspective. Consistent with our hypothesis, individualistic participants were seen to have a significant, positive relationship future time perspective, $r(523) = 0.115, p < 0.01$ (see **Table 3**).

TABLE 3

Correlation Matrix of Individualism and Future Time Perspective		
		F
IND	Pearson's <i>r</i>	0.115**
	<i>p</i> -value	0.004
	95% CI Upper	1.000
	95% CI Lower	0.043

Note: IND = Individualism, F = Future Time Perspective
Note: *H_a* is positive correlation
* *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001, one-tailed

It was predicted that participant scores on the collectivism measure would have a positive relationship with past time perspective. There are two different components of past time perspective, namely past positive and past negative, so both factors were correlated with collectivism. In the correlation to past negative time perspective, we did not see a significant positive relationship. In fact, we saw a *negative* relationship, $r(523) = -0.033, p < 0.05$. In the correlation to past positive time perspective, we saw an expected significant, positive relationship, $r(523) = 0.454, p < 0.001$ (see **Table 4**).

TABLE 4

Correlation Matrix of Collectivism and Past Negative and Past Positive Time Perspectives			
		PN	PP
COL	Pearson's <i>r</i>	-0.033	0.454***
	<i>p</i> -value	0.778	<.001
	95% CI Upper	1.00	1.00
	95% CI Lower	-0.105	0.395

Note: COL = Collectivism, PN = Past Negative, PP = Past Positive
Note: *H_a* is positive correlation
* *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001, one-tailed

The bulk of our findings came from the correlations between each facet of time perspective and anxiety. A positive, significant relationship was found between PN and anxiety, $r(523) = 0.577, p < 0.001$ and between PF and anxiety, $r(523) = 0.431, p < 0.001$, as hypothesized. A negative, significant relationship was found between PP and anxiety, $r(523) = -0.124, p < 0.01$, and between F and anxiety, $r(523) = -0.077, p < 0.05$, which is consistent with our hypotheses. A positive, significant relationship was found between PH and anxiety, $r(523) = 0.285, p < 0.001$, which was the opposite of what we had hypothesized (see **Table 5**). This result was intriguing and suggests the need for further research.

TABLE 5

Correlation Matrix of Anxiety						
		PN	PP	F	PP	PF
ANX	Pearson's <i>r</i>	0.577***	0.285***	-0.077*	-	0.431***
		*	*		0.124**	*
	<i>p</i> -value	<.001	<.001	<0.05	0.005	<.001
	95% CI Upper	0.632	0.362	0.009	-0.038	0.499
	95% CI Lower	0.517	0.205	-0.161	-0.207	0.359

Note: ANX = 16PF subscale; PN = Past Negative Time Perspective, PH = Present Hedonistic Time Perspective, F = Future Time Perspective, PP = Past Positive Time Perspective, PF = Present Fatalistic Time Perspective.
* *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001

DISCUSSION

This study assessed the relationships between time perspectives, level of individualism, and anxiety. The significant and positive relationship found between individualism and future time perspective suggests that, consistent with descriptions of individualistic participants, these individuals emphasize attaining future goals (Shirai & Beresneviene, 2005). Collectivistic participants relate positively with the past positive time perspective, which allows us some further confirmation of the descriptors surrounding collectivistic people as being highly relational beings who develop their identity on the basis of the relationships in their lifetime (Brislin & Kim, 2009). This identity development may be recognized as a positive one due to the additional finding that collectivism is negatively correlated with past negative time perspective. The past negative time perspective indicates one reconstructs past events in a negative light.

Individuals with a past negative and present fatalistic time perspectives generally have a pessimistic outlook on life suggesting that they would have a higher tendency towards anxiety. Based on our results, this is further validated. Conversely, individuals who have a past positive outlook and those who are more future-oriented should be less likely to be anxious. This was seen in our results, which is consistent with the characteristics of those who have PP and F time perspectives (Wu et al., 2019). An interesting finding is that of the positive relationship between present hedonistic time perspective and anxiety. This is contrary to our hypothesis, which originated from the characteristics of PH time perspective including being very laid back and unconcerned with risk-taking (Zimbardo & Boyd, 1999). However, the fact that these individuals have opposing characteristics to those with future time perspective, such as lack of care for the future and greater focus on present pleasures, it would seem fitting to have an opposing relationship with anxiety.

These findings are valuable in their increased representation. As opposed to the existing research on time perspectives for which data is limited to individuals of a single country, this present study assesses individuals from 22 countries. Not only does this increase generalizability, but it also allows us to address a cross-cultural element. It can be suggested that culture does play a role in the way individuals view time. Additionally, this temporal orientation does have implications on the tendency one has towards being more or less anxious. This result adds to the support of Time Perspective Therapy in addressing what additional factors may contribute to a client's anxiety within the clinical practice of treatment of psychiatric disorders.

Limitations

Despite the significant findings resulting from analyses of our participant data, there are several limitations present within this study. Although representation has been improved in comparison to past studies on time perspective, the representation within individual countries that make up the basis of our findings on tendencies toward individualism or collectivism within countries as a whole is lacking (e.g. UK $N=4$, Canada $N=9$). Additionally, when seeking participants of different countries of origin, we recognized our study became further limited as it was only produced in the English language. Moreover, the INDCOL scale for measuring individualism and collectivism may not have been the most valid measure of this variable for the nature of our study, as Hofstede (2010) notes individualism is often measured on a spectrum and not dichotomously. Furthermore, seeing as this study is correlational, it is not ethical nor responsible to imply causation from the significant relationships found. It is important to keep one's time perspective and culture in consideration when addressing factors contributing to mental health, yet it cannot be said that a certain time perspective causes, or does not cause, anxiety in an individual.

Future Research

Given the high prevalence anxiety has in our world, further research should continue to be done to better understand the contributing role our culture and mindset have on its persistence. As detailed previously, expansion on representation is still needed if this present study were to be replicated. Moreover, exploration of other assessments of individualism would be warranted to strengthen the validity of our findings. The unforeseen relationship found between present hedonistic time perspective and anxiety would be one variable to consider in future research of this kind. Past research has not found this correlation that resulted from our data, thus additional analyses may add reliability to the relationship present here. Unfortunately, the variables present in this research are ones that cannot be easily manipulated, so experimental research may not be feasible under these conditions; yet, the strength in correlations between time perspective, individualism, and anxiety still have grand implications for treatment of anxiety and increased understanding of the role culture has on one's outlook. Utilizing the data surrounding the relationships between facets of TP and anxiety, further research could also seek to determine whether balanced time perspective therapy is effective in "undoing" some of these relationships.

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