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The Direct and Indirect Influences of Parenting: The Facets of Time-Perspective and Impaired Control along the Alcohol-Related Problems Pathway

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Abstract

Background: Social Learning Theory suggests how one conceptualizes time will be passed from parent to child (Bandura & Walters, 1963). Through the lens of Behavioral Economics Theory (Vuchinich & Simpson, 1998), impaired control may be characterized as consuming alcohol as a form of immediate gratification as a choice over more distal rewards. Because impaired control reflects a self-regulation failure specific to the drinking situation, it may be directly related to time-perspectives.

Objectives: This investigation explored whether or not the indirect influences of perceived parenting styles on alcohol use and related problems is mediated by both facets of time-perspective (e.g. hedonism, present-fatalism, future, past-positive, past-negative) and impaired control over drinking.

Methods: We examined a structural equation model with 391 (207 women; 184 men) college student drinkers. We used an asymmetric bias-corrected bootstrap technique to conduct mediational analyses (MacKinnon, 2008).

Results: Higher levels of past-positive time-perspective were indirectly linked to both less alcohol use and fewer alcohol-related problems through less impaired control. In contrast, higher levels of present-fatalism were indirectly linked to more alcohol use through more impaired control. Higher levels of father permissiveness and mother authoritarianism were indirectly linked to both more impaired control and alcohol use through more present-fatalism. In addition, higher

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levels of father authoritarianism were indirectly linked to more alcohol use through more hedonism.

Conclusions/Implications: Our results support the notion that drinking beyond one's self-prescribed limits is associated with time-perspectives related to negative aspects of the parent-offspring socialization process, such as fatalism.

Keywords

Parenting; Time-Perspective; Impaired Control; Drinking Control; Alcohol-Related Problems; Fatalism

Beyond being a physical dimension of our world, time is also a phenomenon that is open to our subjective interpretation. In the nature of time, there exists a paradox in that, "time-perspective is one of the most powerful influences on our decisions, yet we are typically unaware of its role" (Zimbardo & Boyd, xiv 2008). Behavioral Economics Theory suggests heavy- drinking, emerging adults place less value on delayed outcomes and are thus more prone to engage in behaviors related to more proximal rewards such as drinking to excess (Vuchinich & Simpson, 1998). Conceivably, a sound understanding of how individuals perceive time could have important implications for understanding alcohol use and related problems. Parenting has an important impact on the socialization process of an individual's identity development, including how one perceives time (Smits, et al., 2008). Thus, different styles of parenting may differentially influence one's time-perspective.

According to Social Learning Theory (Bandura & Walters, 1963), favoring distal over proximal rewards is often adaptive and is frequently modeled by authoritative parental figures (i.e., parents who provide both structured rules and warmth; Buri, 1991). Evidence suggests emerging adults may be a particularly vulnerable group for inordinate discounting of future rewards (Murphy, et al., 2007). As such, time-perspectives may be useful organizing principles for risk and protective factors related to subjective perceptions of distal (e.g., graduating from college) versus more immediate rewards (e.g., having another cold beer). Alcoholic beverages are viewed as highly rewarding, particularly by young adults who are early in their drinking careers (Koob & Le Moal, 2001). Behavioral Economic Theory posits that devaluing of delayed (e.g., good grades) in favor of proximal rewards (e.g., having another beer) is a core aspect of addictive behaviors (Madden & Bickel, 2009; Vuchinich & Simpson, 1998). This suggests that even if individuals self-impose limits on their drinking, they may not be willing or able in the moment to focus on the value of delayed rewards (i.e., fulfilling their adult responsibilities; Murphy, et al., 2007). As such, time-perspective may be related to impaired control over drinking.

Impaired control reflects one's inability to curb drinking behaviors notwithstanding specified intentions to do so (Heather, et al., 1993; Leeman, Patock-Peckham, & Potenza, et al., 2012). Impaired control develops relatively early in one's drinking life cycle, and it predicts and precedes more severe alcohol-related problems among young adults (Leeman, et al., 2009). While the extant literature has established time-perspective to be related to and predictive of alcohol use, substance use, and other potentially harmful outcomes, (Rothspan & Reed, 1996; Zimbardo & Boyd, 1999; Zimbardo, et al., 1997) it has not been studied

along with impaired control. Given impaired control's increasing relevance (i.e., as a dysregulated pattern of drinking; Patock-Peckham et al., 2001; 2006; 2011; Claus, et al., 2011), we sought to investigate the ways in which time-perspective directly related to impaired control along the alcohol use and alcohol-related problems pathways. While our study is theoretically driven, it is cross-sectional in nature due to its novelty in the literature and should be considered a first look at the associations among these variables.

Perspectives and How They Influence Time.

Individuals' experiences can be categorized temporally and differentiated between five different time-perspectives: future, present-hedonistic, past-positive, past-negative, and present-fatalism (Zimbardo & Boyd, 1999). Table 1 provides a concise summary of the five time-perspectives. Future time-perspective reflects planning for forthcoming events and has been found to significantly predict academic success and health responsibility (Devolder & Lens, 1982; Hamilton, et al., 2003). In contrast, hedonism reflects a tendency toward living for the moment and it has been found to be related to risky driving (Zimbardo, et al., 1997), unsafe sexual practices (Rothspan & Reed, 1996), and increased substance use (Zimbardo & Boyd, 1999). Moreover, Keough, et al. (1999) found that hedonism was a significant predictor of reported substance use even after controlling for personality traits (e.g., conscientiousness, impulse control, novelty-seeking, and sensation-seeking). Past-positive reflects good memories of bygone experiences and is associated with higher levels of happiness and self-esteem (Zimbardo & Boyd, 1999). To date, no one has explored how having a positive-perspective regarding one's past may be related to better control over one's own drinking, less alcohol use, or related problems.

Conceivably, negative viewpoints of life (i.e., time-perspectives) may be related to drinking beyond one's own limits. For instance, a past-negative time-perspective involves painful memories of prior events and is associated with higher risk for anxiety and depression among those in treatment for alcoholism (Davies & Filippopoulos, 2015), as well as poor self-esteem, binge-eating, and binge-drinking (Zimbardo & Boyd, 1999; Laghi, Liga, & Baumgartner, 2012) among non-treatment-seeking individuals. Furthermore, fatalism is characterized by a hopeless attitude about the future and was also associated with greater depression and anxiety among those in treatment for alcoholism (Davies & Filippopoulos, 2015). These perspectives are wide-ranging and have the potential to color our perceptions of reality, which may impact our decisions, such as whether we should have another beer/drink when we have other responsibilities.

According to the Self-Medication Theory (Hersh & Hussong, 2009), an individual may use alcohol as a negative reinforcer to alleviate negative feelings about past events or the anticipated future. For instance, on the ascending limb of the dose response curve, individuals are actively absorbing more alcohol into their bloodstream than they are excreting. This may result in a dampening of stressful or anxious feelings. Based on the Self-Mediation Theory, we expected that present-fatalism and past-negative time-perspectives would be positively associated with impaired control, alcohol use, and alcohol-related problems. In contrast, we expected future and past-positive time-perspectives to be negatively associated with impaired control, alcohol use, and problems. Because of the

hedonistic nature of drinking to excess, we expected that hedonism would be related to all drinking outcomes.

Perceived Parenting Styles and Decisions Involving the Timing of Rewards.

Based on Social Learning Theory (Bandura & Walters, 1963), perceptions of time may be learned from observing one's parents. Prospective developmental data following infants for several years found that parent-child relationships played an important role in offspring developing executive functioning and self-regulation capabilities (Bernier, Carlson, & Whipple, 2010). Moreover, parenting has an important impact on the socialization process of an individual's identity development (Smits, et al., 2008) in emerging adulthood and has long been linked to drinking outcomes (Wood, et al., 2004; Mallett, et al., 2011). There is cross-sectional evidence to suggest that parents modeling better self-regulation in their decision making also have offspring with better abilities in delaying gratification (Patock-Peckham, et al., 2001; 2011). Perceived parenting styles have been indirectly linked to dysregulated drinking through a number of mediating mechanisms, such as anxiety sensitivity (Ebbert, et al., 2018), self-concealment (Hartman, et al., 2015), and impulsivity, (Patock-Peckham, et al., 2011; Patock-Peckham & Morgan-Lopez, 2006). However, to date, no study has explored these relationships involving time-perspectives.

Perceived parenting styles included authoritative, authoritarian, and permissive parenting (Baumrind, 1971). Authoritative parents strike a balance: these parents value discipline while also supporting the child's autonomous self-will. Authoritative parenting has protective qualities against adolescent binge-drinking (Mallett, et al., 2011; Merianos, et al., 2014) and has been found to be indirectly linked to better control over drinking via more positive, general self-regulation (Patock-Peckham, et al., 2001). As such, we expected authoritative parenting to be positively associated with future and past-positive time-perspectives.

Authoritarian parents exert behavioral and emotional control over their child, while lacking warmth and empathy (Baumrind, 1971). When parental control is excessive, offspring away from parents (e.g., their first time such as the first year of college) may partake in more hedonistic behaviors, such as drinking to excess, once they are outside of the reach of their parent's rules (See Brehm's 1966 Reactance Theory). Thus, we expected authoritarian parenting to be associated with hedonism. Moreover, an emotionally over-involved socialization style often leads to more self-medicating behavior on the part of offspring (Hersh & Hussong, 2009). Presumably, a child raised by an authoritarian parent may never develop autonomy and thus perceives his or her world as existing in a predetermined or fatalistic manner. Accordingly, we expected authoritarian parenting to also be positively associated with fatalism.

The permissive style is characterized by high responsiveness and low demandingness (Baumrind, 1971). Many studies suggest that permissiveness is linked to maladaptive behaviors such as alcohol use, substance use, and risky sex (Martins, et al., 2008; Patock-Peckham & Morgan-Lopez, 2006). Patock-Peckham and colleagues (2001) found evidence that permissive parenting is indirectly linked to more dysregulated drinking via reduced

generalized ability to self-regulate. Accordingly, we expected permissive parenting to be positively associated with hedonism.

Multiple researchers have suggested the most appropriate way to study parental influences is to study the impact of both mothers and fathers simultaneously (See special issue of PAB: Chassin & Handley, 2006; Fromme, 2006; Patock-Peckham & Morgan-Lopez, 2006; Van der Vorst, et al., 2006). Unique mother and father parental influences explain various pathways to alcohol use and related problems. Internalizing mechanisms appear to be influenced more by fathers. For instance, authoritarian fathering has been shown to be indirectly linked to increased alcohol-related problems for both daughters and sons via the mechanisms of lower self-esteem and depression (Patock-Peckham & Morgan-Lopez, 2007). Authoritarian fathering was also indirectly linked to alcohol-related problems through increased neuroticism and self-medicating reasons for drinking among sons (Patock-Peckham & Morgan-Lopez, 2009). Hence, we anticipated that there would be unique influences of parenting by mothers as well as by fathers regarding time-perspectives. Our inclusion of both mothers and fathers perceived parenting styles is important, as fewer than 20% of all studies on parenting behaviors include measures specific to fathers (Hoeve, et al., 2009). Father-specific measures are crucial. Multiple studies on deviance have shown that unsupportive/unstructured interactions with fathers had a stronger negative impact on sons than similar interactions with their mothers (see Hoeve et al.,'s meta-analysis, 2009).

Hypotheses for the Current Study.

Given the previous literature on perceived parenting styles and time-perspective, we expected that the associations between perceived parenting styles, alcohol use, and alcohol-related problems would be mediated by time-perspectives as well as by impaired control. We predicted the authoritative parenting style to be indirectly linked to less alcohol use and fewer alcohol-related problems through increased future and past-positive time-perspectives and in turn, less impaired control (Merianos, et al., 2014; Patock-Peckham, et al., 2001). We also hypothesized that both permissive and authoritarian parenting would be indirectly linked to more alcohol use and alcohol-related problems via increased hedonism, fatalism, past-negative, and in turn, more impaired control (Patock-Peckham & Morgan-Lopez, 2006; Patock-Peckham, et al., 2001; Davies & Filippopoulos, 2015; Keough, et al., 1999).

Methods

Participants

Participants included 706 university students. All participants were compensated with one credit hour toward introductory psychology course requirements. Our final sample included 391 (207 women; 184 men) participants who all reported being drinkers of alcoholic beverages. In order to address issues involved with skew, we dropped non-drinkers from the analysis. As there were a large number of under-aged participants in this sample, there were many non-drinkers, which would have created two distinct distributions of people. When one is interested in alcohol-related problems as an outcome variable, it is advised in the extant drinking literature to drop the abstainers from the sample (Krueger, et al., 1994; Bartholow, Sher, & Strathman, 2000). Moreover, to address issues involved with skew we

used bias-corrected bootstrapping techniques in order to obtain the asymmetric confidence intervals (MacKinnon, 2008). Our final sample $N=391$ was 47% male with an average age of 19.77 years ($SD=1.67$). Ethnicity of the final sample of drinkers included 9% African American, 67.8% Caucasian, 11.5% Hispanic, 0.8% Native American, 7.9% Asian, and 3.1% other.

Measures

Zimbardo Time-Perspective Inventory.—The Zimbardo Time Perspective Inventory (ZTPI) (Zimbardo & Boyd, 1999) is a 56-item measure that assesses an individual's Future, Present-Hedonistic, Past-Positive, Past-Negative, and Present-Fatalistic time orientation. An item from the 13-item Future scale included: "Meeting tomorrow's deadlines and doing other necessary work come before tonight's play." The 15-item Present-Hedonistic scale included items, such as: "I find myself getting swept up in the excitement of the moment". The 9-item Past-Positive scale included items like: "I get nostalgic about my childhood." The scale for the Past-Negative factor contained 10-items, such as: "I think about the bad things that have happened to me in the past". Sample items from the 9-item Present-Fatalistic factor include: "My life path is controlled by forces I cannot influence" and "Often luck pays off better than hard work." Participants were asked to respond to these items by answering the question "How characteristic or true is this of you?" with responses ranging from 1 = *very uncharacteristic* to 5 = *very characteristic*. Internal consistency was adequate for each dimension: Future $\alpha = .74$, Present-Hedonistic $\alpha = .81$, Past-Positive $\alpha = .73$, Past-Negative $\alpha = .86$, and Present-Fatalistic $\alpha = .70$. Factor analyses in a variety of languages suggest that each of these time-perspectives constitutes a distinct construct (Ryack, 2012; Zhang, Howell, & Bowerman, 2013; Anagnostopoulos & Griva, 2012; Diaz-Morales, 2006).

Impaired Control.—This scale reflects 10-items from the Impaired Control Scale (Heather, et al., 1993). Higher scores on this scale reflect a lack of perceived control over drinking (i.e., an inability to stop drinking despite an intention to do so). A sample item included: "Even if I intended on having only one or two drinks, I would end up having many more." Possible responses ranged from 1 = *strongly disagree* to 5 = *strongly agree*. This measure demonstrated good internal consistency with $\alpha = .82$.

Parental Authority Questionnaire.—The Parental Authority Questionnaire (Buri, 1991) is a 60-item measure (30 per parent) based on Baumrind's (1971) prototypes of perceived authoritative, authoritarian, and permissive styles of parenting within a family. A sample item for the 10-item authoritativeness scale is, "As I was growing up, I knew what my (mother/father) expected of me in my family, but I also felt free to discuss those expectations when I felt they were unreasonable." An item from the 10-item authoritarianism scale included "As I was growing up, my (mother/father) did not allow me to question any decision she/he had made." A sample item for the 10-item permissiveness scale included: "While I was growing up, my (mother/father) felt that in a well-run home the children should have their way in the family as often as the parents do." We asked our participants to fill these questions out based on who they felt served as their mother or father. Possible responses to the Parental Authority Questionnaire ranged from 1 = *strongly disagree* to 5 = *strongly agree*. The Cronbach's α reliabilities in this sample were as follows: mother

permissive .73, father permissive .79, mother authoritarian .85, father authoritarian .89, mother authoritative .82, and father authoritative .87.

Alcohol Use (Quantity/Frequency) Measure.—Frequency of alcohol use in the past year was coded as follows: 1 = less than once a month, 2 = once a month, 3 = 2 or 3 times a month, 4 = once a week, 5 = 2 or 3 times a week, 6 = 4 or 5 times a week, 7 = daily or nearly daily. Drinking quantity was measured with the question, “What is your usual quantity of alcoholic beverages consumed at any one drinking occasion?” Responses for drinking quantity were 1 = 1 bottle or can of beer, 1 glass of wine, or 1 drink of distilled spirits, 2 = 2 bottles, glasses, or drinks, 3 = 3 or 4 bottles, glasses or drinks, 4 = 5 or 6 bottles, glasses, or drinks, and 5 = 7 or more bottles, glasses or drinks. The quantity and frequency items were combined into a single quantity/frequency scale by converting the frequency levels into equivalent occasions per month (ranging from 1 = 0.5 times per month to 7 = 28 times per month) and the quantity levels into equivalent grams of alcohol (ranging from 1 = 10g a month to 5 = 70g a month). Their values were then multiplied, and the distribution of the scores was transformed through a \log_{10} transformation (Wood, Nagoshi, & Denis, 1992).

Alcohol-Related Problems.—These 12 items came from the Problems with Alcohol Use Measure which indicates alcohol abuse or dependence (Rhea, et al., 1993). The first item of the measure “lost control of drinking, neglecting obligations, family, or work” was dropped as it reflects an impaired control item. Of the eleven remaining items, sample items included, “Felt you drank too much, possibly damaging your mental and/or physical health” and “Resented and/or avoided people who commented on my drinking habits.” Each of these 11-items was assessed on a scale from 0 = *never* to 3 = *many times*. The α reliability for this sample was .87.

Analysis-Plan

A path model was fit using Mplus v7.2 (Muthén & Muthén, 1998–2016) with bias-corrected bootstrapping and full information maximum likelihood (FIML) estimation of missing data to evaluate our conceptual model depicted in Figure 1. Model fit was determined by examining the Comparative Fit Index (CFI; Bentler, 1990) and Root Mean Square Error of Approximation (RMSEA; Browne & Cudeck, 1993; Hu & Bentler, 1998), as well as Chi-Square statistics. Mediation analyses (Holmbeck, 1997) were conducted to investigate indirect influences of parenting styles on alcohol-related problems through time-perspective, impaired control, and alcohol use quantity/frequency. The bias-corrected bootstrap technique (K=20,000) was used to examine indirect effects (Efron & Tibshirani, 1993) by using the model indirect command in Mplus. This strategy was implemented to address non-normality, which is common in substance use data (Fritz & MacKinnon, 2007). 95% asymmetric confidence intervals around the estimates were also examined (Hancock & Liu, 2012; MacKinnon, et al., 2004; Taylor, et al., 2008; Tofghi & MacKinnon, 2011). When zero is not found in the asymmetric confidence interval there is evidence of mediation.

Results

Descriptive statistics for all variables in the theoretical model are presented in Table 2. The theoretical model shown in Figure 1 provided good fit for the data $\chi^2 (22 \text{ df}) = 29.171$, $p = .1400$; RMSEA = .029 90% CI (0.000, 0.054); CFI = .991. Unstandardized coefficients are reported in the text with standardized coefficients reported on Figure 2.

Direct-Effects from Parenting Styles to Time-Perspectives (Unstandardized Coefficients Reported)

Higher levels of father authoritarianism were directly linked to present-hedonism, ($\beta = .012$; $Z = 2.361$, $p = .018$). Higher levels of father authoritative were negatively directly linked to a less past-negative perspective, ($\beta = -.014$; $Z = -2.171$, $p = .030$) and positively directly linked to more past-positive, ($\beta = .013$; $Z = 2.946$, $p = .003$). In addition, father permissiveness was directly linked to less past-positive, ($\beta = -.014$, $Z = -2.184$, $p = .029$), to more past-negative, ($\beta = .028$, $Z = 3.048$, $p = .002$), and to more fatalism, ($\beta = .023$; $Z = 3.178$, $p = .001$). In contrast, higher levels of mother permissiveness were directly linked to more past-positive, ($\beta = .016$, $Z = 2.043$, $p = .041$). Higher levels of mother authoritative were directly linked to more past-positive, ($\beta = .023$; $Z = 3.809$, $p < .001$), and to more future-orientation, ($\beta = .013$, $Z = 2.881$, $p = .004$). Lastly, higher levels of mother authoritarianism were directly linked to more fatalism, ($\beta = .013$; $Z = 1.987$, $p = .047$).

Direct-effects of Time-Perspectives to Impaired Control, Alcohol Use and Alcohol-Related Problems (Unstandardized Coefficients Reported)

Fatalism was directly linked to more impaired control, ($\beta = .229$, $Z = 3.422$, $p = .001$). Past-positive was negatively directly linked to impaired control, ($\beta = -.137$, $Z = -2.049$, $p = .040$). Impaired control was directly linked to more alcohol use ($\beta = .284$, $Z = 4.140$, $p < .001$) and to more alcohol-related problems ($\beta = .403$, $Z = 10.917$, $p < .001$). Fatalism was directly linked to less alcohol use ($\beta = -.146$, $Z = -2.64$, $p = .008$). Higher levels of past-negative were directly linked to more alcohol-related problems ($\beta = .102$; $Z = 3.943$, $p < .001$). Higher levels of future-orientation were directly related to less alcohol-related problems ($\beta = -.092$; $Z = -2.249$, $p = .024$). Lastly, higher levels of hedonism were directly linked to more alcohol use ($\beta = .284$; $Z = 4.140$, $p < .001$) as well as more alcohol-related problems ($\beta = .116$; $Z = 2.988$, $p = .003$).

Direct-Effects for Gender

Being a woman was directly linked to a higher level of future-orientation, ($\beta = -.263$, $Z = -4.989$, $p < .001$), and a past-positive orientation, ($\beta = -.140$, $Z = -2.452$, $p = .014$). Being as man was directly linked to more alcohol use, ($\beta = .427$, $Z = 6.859$, $p < .001$), and more alcohol-related problems, ($\beta = .116$, $Z = 2.998$, $p = .003$).

Mediated-Effects (Outcome variable in bold)

Higher levels of father permissiveness were indirectly linked to more **impaired control** through more present-fatalism [mediated effect = .002; 95% CI (.001, .005)]. Higher levels of father authoritarianism were indirectly linked to more **alcohol use** through more hedonism [mediated effect = .003; 95% (CI .001, .008)]. In contrast, higher levels of past-

positive were indirectly linked to less **alcohol use** through less impaired control [mediated effect = $-.042$; 95% CI ($-.087, -.003$)]. Higher levels of present-fatalism were indirectly linked to more **alcohol use** through more impaired control [mediated effect = $.070$; 95% CI ($.030, .127$)]. In addition, higher levels of father permissiveness were indirectly linked to more **alcohol use** through more present-fatalism and more impaired control [mediated effect = $.002$; 95% CI ($.001, .004$)]. Moreover, higher levels of past-positive were indirectly linked to fewer **alcohol-related problems** through less impaired control [mediated effect = $-.055$; 95% CI ($-.111, -.003$)].

Discussion

To our knowledge, this is the first study to examine how time-perspective is indirectly linked to alcohol use and related problems through the potential mediating mechanism of impaired control. Impaired control's status as one of the earliest occurring symptoms of addiction makes it an important topic (Leeman, et al., 2012; 2009). Our findings show that a past-positive time-perspective is directly linked to less impaired control. We also show that future-orientation is associated with fewer alcohol-related problems and that present-fatalism is associated with more impaired control symptoms.

As Behavioral Economic Theory would suggest, our data imply that individuals capable of placing greater value on long-term goals over short-term positive rewards are less likely to engage in dysregulated drinking (Madden & Bickel, 2009; Vuchinich & Simpson, 1998). Consistent with Patock-Peckham, et al's., (2001) study of self-regulation, we found that a future-orientation captures this forward-goal-thinking aspect and relates to fewer alcohol-related problems for emerging adults.

Behavioral Economic Theory also predicts that individuals who emphasize present-time perspectives (present-fatalism, present-hedonism) may have difficulty in delaying immediate gratification regarding drinking (Madden & Bickel, 2009; Vuchinich & Simpson, 1998). Our present findings suggest present-fatalism may be important to explore with individuals experiencing issues with impaired control, and excessive alcohol use. This is consistent with Hersh and Hussong's (2009) idea that an emotionally over-involved socialization style often leads to more self-medicating behavior on the part of offspring. In particular, our study highlights the direct link between mother authoritarianism and a fatalistic time-perspective in offspring. Fatalism reflects feelings of hopelessness, which often plays an important role in both alcohol use and suicide completions, particularly among men (Hewitt, et al., 1998; Suominen, et al., 1997). As fatalism has been associated with anxiety and depression among individuals in treatment for alcoholism (Davies & Filippopoulos, 2015), attempting to change fatalistic beliefs among individuals having issues with impaired control may be a future intervention target. Interestingly, the finding that mother authoritarianism was linked to fatalism, rather than father authoritarianism, is in stark contrast to the extant literature, showing authoritarian fathering being linked to other internalizing symptoms, such as neuroticism and depression (Patock-Peckham & Morgan-Lopez, 2007; 2009). This suggests unique influences from perceived parenting styles are in need of further exploration.

Our study also expands the existing literature by showing that hedonism may play a key role in alcohol use and alcohol-related problems, but it does not appear to operate through impaired control as a mediating mechanism. Several items of the ZTPI hedonism facet seem to be measuring sensation-seeking (i.e., “It is important to put excitement in my life,” and “Taking risks keeps my life from becoming boring”). In fact, the present-hedonism subscale of the ZTPI is strongly correlated with Novelty-Seeking, as measured in the Tridimensional Personality Questionnaire (Cloninger, et al., 1991), and Sensation-Seeking (Zuckerman, et al., 1978). Presumably, the present-hedonism scale is more closely measuring sensation-seeking rather than impulsiveness. Thus, this finding is consistent with the extant literature showing impaired control is more closely associated with impulsivity than sensation seeking (Patock-Peckham, et al., 2011b). Moreover, the hedonism scale includes items that may also be related to mindfulness. These items, such as “When listening to my favorite music, I often lose track of time,” suggest that present-hedonism is at least partially concerned with a present awareness that would presumably be negatively associated with a variable like impaired control. Further, it is conceivable that present-hedonists simply do not place planned limits on their drinking, which is a necessary component of the impaired control variable (Heather, et al., 1993). Interestingly, father authoritarianism, but not mother authoritarianism was directly linked to hedonism in our study. While this is a new finding, it is not clear why cold paternal rather than cold maternal rules lead to hedonism. This warrants further study.

Consistent with Social Learning Theory (Bandura & Walters, 1963) and the extant literature on parenting influences on alcohol through the mediating mechanisms of self-regulation and impulsivity (Patock-Peckham, et al., 2001; Patock-Peckham & Morgan-Lopez, 2006; Chassin & Handly, 2006), we found authoritative parenting by mothers was associated with a future-orientation. Authoritative parents model good self-regulation of their own actions and thus are more likely to have offspring that follow this forward-thinking.

There are limitations to this study including the cross-sectional nature of the design and the fact that a college sample was used. It is possible that there may be reciprocal relationships in which using alcohol over a long period of time might also make someone have a more fatalistic view of their present or a more negative view of their past. Therefore, the present study needs to be considered exploratory and considered only from the direction in which the model was proposed. Also, our study only included individuals who fell into a dichotomy regarding their gender identity. Future investigations may wish to explore a more inclusive sample with members of the LBGTQ (lesbian, gay, bisexual, transgender, and questioning) community. Regardless of the exploratory and cross-sectional nature of this study, we add to the literature by demonstrating that perceived parenting styles play a role in alcohol outcomes in part through their influence on time-perspective. Specifically, our findings suggest that fatalism may be an important therapeutic target of dysregulated drinking. Conversations regarding fatalistic-beliefs may begin with the exploration of permissive or non-present fathers partnered with mothers who had to overly compensate with an authoritarian style of parenting. Words =4912 LIMIT 5000

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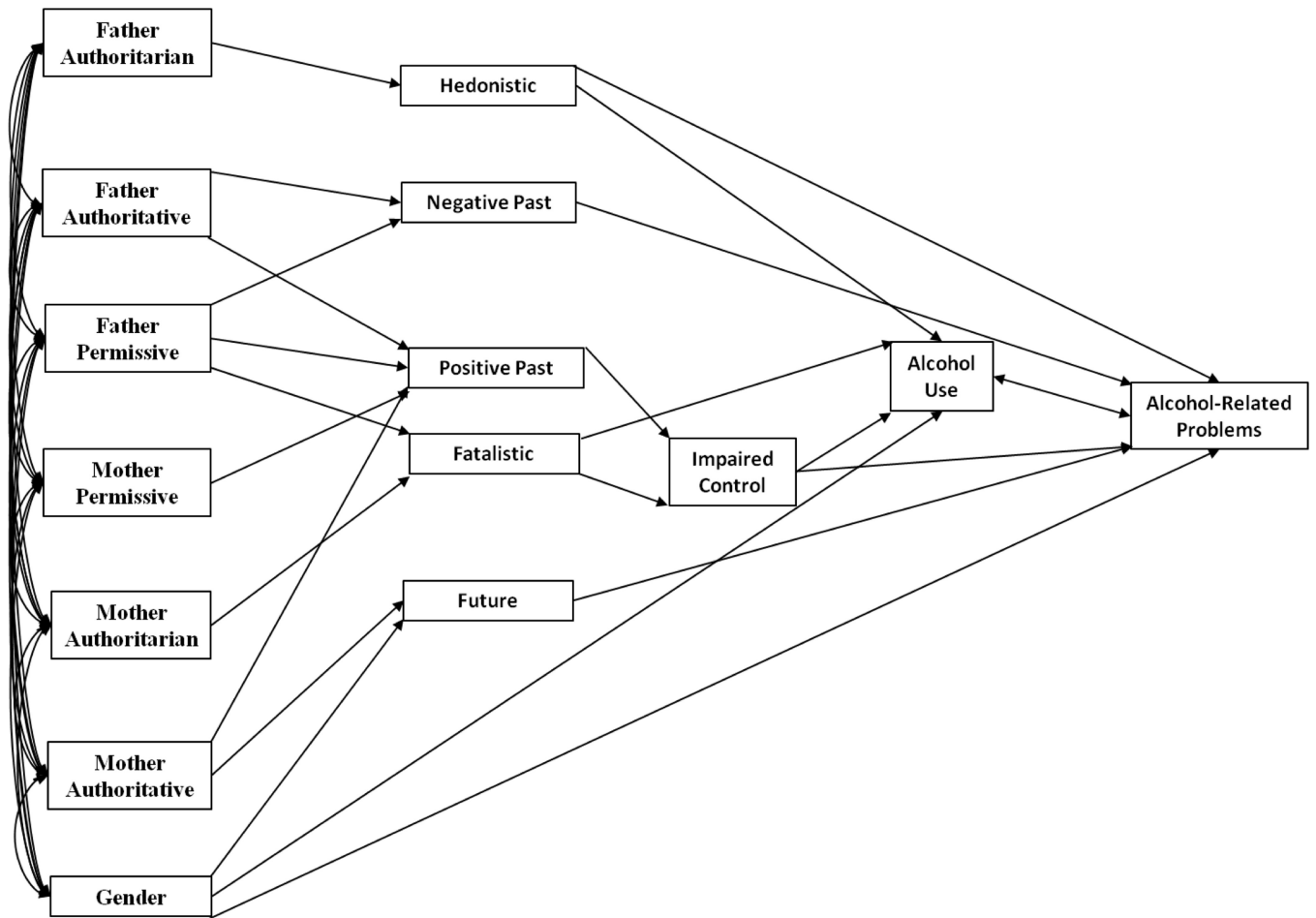


Figure 1. Conceptual model with all of the examined paths among the exogenous and endogenous variables; Time perspectives were also allowed to correlate with each other in the model.

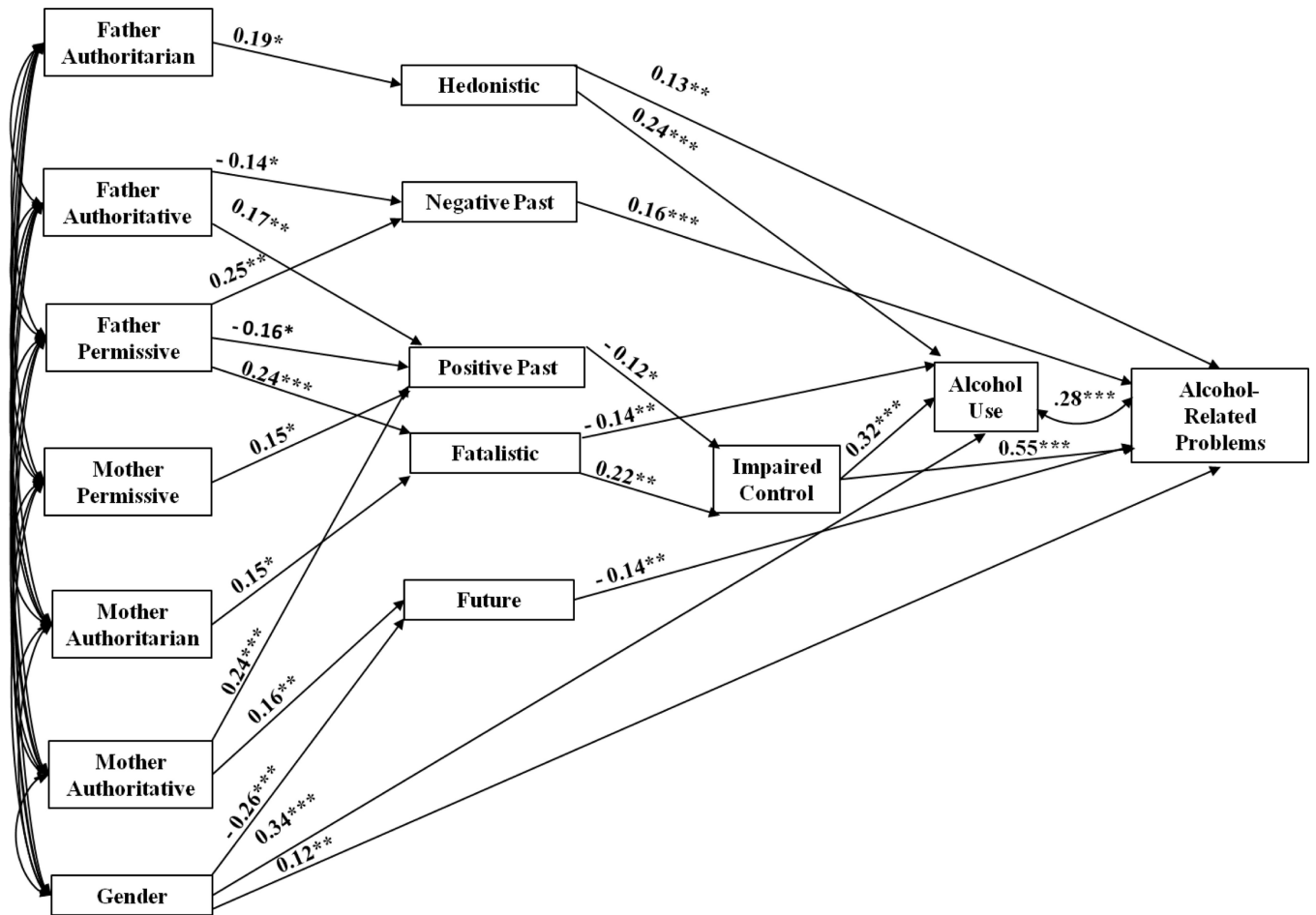


Figure 2. Fit path model with standardized coefficients shown for all participants with all exogenous variables and all time perspectives allowed to, correlate with each other freely in the model. N=391; * p < .05; ** p < .01; *** p < .001.

Table 1:

Definitions and examples of the five facets of Time-Perspective.

Time-Perspective	Definition	Example
Future	Thinking about, planning for, and valuing the future; Goal setting	I am able to resist temptations when I know there is work to be done
Present-Hedonistic	Living in the moment; Seeking pleasure	Ideally, I would live each day as if it were my last
Past-Positive	Holding good memories of past experiences; Being nostalgic about one's childhood	It gives me pleasure to think about my past
Past-Negative	Negatively ruminating about past experiences; Dwelling on previous hardships	I often think of what I should have done differently in my life
Present-Fatalistic	Expressing cynicism and hopelessness about the future	My life path is controlled by forces I cannot influence

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Table 2: Means, Standard Deviations, and Correlations Among all the Variables in the Model.

M	SD	Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3.64	0.53	1. Hedonistic	1.00														
2.86	0.75	2. Negative Past	0.14	1.00													
3.43	0.51	3. Future	-0.11	-0.14	1.00												
3.74	0.59	4. Positive Past	0.29	-0.29	0.25	1.00											
2.62	0.63	5. Fatalistic	0.32	0.55	-0.28	-0.08	1.00										
1.60	0.71	6. Alcohol Use	0.25	-0.03	-0.22	0.07	0.06	1.00									
0.60	0.49	7. Alcohol-Related Problems	0.21	0.27	-0.28	-0.15	0.30	0.47	1.00								
1.70	0.65	8. Impaired Control	0.07	0.15	-0.21	-0.16	0.25	0.36	0.61	1.00							
23.88	5.52	9. Mother Permissive	0.06	-0.03	-0.05	0.03	0.00	0.12	0.09	0.11	1.00						
24.41	6.74	10. Father Permissive	0.06	0.09	-0.10	-0.06	0.13	-0.01	0.09	0.06	0.56	1.00					
36.80	6.05	11. Mother Authoritative	0.03	-0.12	0.19	0.28	-0.10	-0.03	-0.07	-0.07	0.11	0.07	1.00				
34.64	7.49	12. Father Authoritative	0.05	-0.16	0.06	0.21	-0.08	-0.05	-0.04	-0.11	0.02	0.22	0.41	1.00			
31.46	7.32	13. Mother Authoritarian	0.11	0.22	-0.02	-0.05	0.20	-0.08	0.03	-0.02	-0.48	-0.16	-0.35	-0.12	1.00		
33.87	8.54	14. Father Authoritarian	0.13	0.16	0.06	0.01	0.12	0.05	0.05	-0.03	-0.21	-0.48	-0.14	-0.40	0.49	1.00	
0.47	0.49	15. Gender	0.09	0.08	-0.27	-0.14	0.08	0.40	0.24	0.12	0.05	0.01	-0.10	-0.04	0.04	0.10	1.00