

Zhu, Tse, Cheung & Oyserman Will I get there? Effects of parental support on children's possible selves 2014 BJEP

Full Presentation of Procedure, Measures, and Analysis Plan

The British Journal of Educational Psychology has space constraints, which did not allow us to publish the full procedure, all the measure details, or detailed analyses plan. This document supplements the information in the paper.

Procedure

The study, part of a larger study by the Hong Kong Anti-drug Addiction Community Consortium, was approved by the Human Research Ethics Committee for Non-Clinical Faculties at The University of Hong Kong. Letters were sent to parents describing the study and its voluntary nature. Parents wishing to exclude their child were asked to sign and return a form. On the day of data collection, students whose parents had not excluded them were asked to assent to participate and again told that the study was voluntary and responses were anonymous. The questionnaire and instructions were in Chinese. To ensure the Chinese wordings matched the original meaning, questions were translated and back-translated following (Maneesriwongul & Dixon, 2004).

Sampling Procedure

The selected district is demographically average (Hong Kong Census and Statistics Department, 2006) among the 18 city districts in Hong Kong. Secondary schools in the selected district were invited to participate in the District Youth Study of the District Anti-drug Addiction Community Consortium. Eleven (73%) of the 15 secondary schools in the district agreed (the others did not differ on available characteristics -- school size, and the neighborhood where they

are situated). A total of 3,160 students in 99 classes across the 11 schools participated (6 to 10 classrooms per school, about 30 students per class).¹

Data Collection Procedure and Measures

All data were collected in spring 2010 in classrooms of 25-30 students supervised by a research assistant. Students were given booklets which took 15-20 minutes to complete and began with questions about substance use (the focus of the larger study), followed by possible self and parental support questions and concluding with delinquent activity (the focus of the larger study) and social desirability scale questions followed by demographics questions. Specific instructions and measures are detailed next in order of their appearance in the test booklet.

Illicit drug use. Students were asked “Have you ever used the following illicit drugs in the past six months? If yes, please make the column next to the name of drug.” Nine illicit drugs were listed (Ecstasy, ketamine, marijuana, heroin, cocaine, ice, organic solvent, codeine, and pills such as Blue Gremlin and Five). Drug use of any kind was low (2.8%) so this variable was dummy coded as 1 = ever use any drug, 0 = never use any drug in the past six months. Though it is not the focus of interest for the present study, given its placement in the questionnaire booklet before the questions of interest, substance use was included as a control in preliminary analyses. Including or excluding it does not affect the current analyses, so for simplicity, it is excluded. More information about this variable can be found at (Tse, Tsang and Zhu et.al (under review).

¹ Secondary school includes seven forms. Forms one to six are equivalent to U.S. grades seven to twelve. Form seven is the last high school grade in Hong Kong, which akin to the Canadian system, has an additional high school year. During the time of data collection, students in forms five and seven were attending public examinations and so were not included in the sample. In each participating school, two or three classes were randomly selected from forms one, two, three, four, and six (equivalent to grades 7 to 10 and grade 12 in the US system).

Possible selves. Possible self instructions and questionnaire matrices were adopted from Oyserman and colleagues (2004; 1993). Students read: “Each of us has some images or pictures in mind of what we will be like or what we want to avoid being like in the future. Think about your coming future years – imagine what you hope to be like and write down two hoped-for possible selves below” (87% of participants generated at least one hoped-for self). “For each hoped-for self, mark the column labeled *have some plan* to attain that hoped-for possible self and write in what you plan to do.” (57% reported one or more strategies). “For each of the hoped-for selves you wrote, please answer three questions. First, rate how likely it is that you will attain it. Use a ‘1’ if the likelihood is very low and a ‘5’ if the likelihood is very high and the numbers in between to represent increasing likelihood. Second, rate how much you agree that the formation of this hoped-for self is influenced by your parents. Third, rate how much you agree that the formation of this hoped-for self is influenced by your peers. Select a ‘1’ if you strongly disagree, a ‘5’ if you strongly agree and select the in between numbers to represent increasing agreement”. After completing the hoped-for matrix and questions, students completed the same instruction set for feared possible selves. About 85% of participants generated at least one feared possible self and 30% reported one or more strategies to avoid becoming like their feared self. Open-ended responses were counted and content coded. As presented in Table 1, the most common response for hoped-for possible selves focused on school and career (74% of students have at least one) and the most common response for feared possible selves focused on avoiding drug use (57% of students have at least one). Likelihood, parent influence and peer influence responses were each averaged separately for hoped-for possible selves and feared possible selves (α 's .56 to .81).

Perceived parental support. Students rated how much they agreed or disagreed (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5=strongly agree) with twelve randomly

ordered statements reflecting pragmatic (seven items, $\alpha = .85$) and socio-emotional (five items, $\alpha = .92$) support received from parents (Wills, et al., 1992). Pragmatic items were: “If I talk to my parents, they have suggestions about how to handle problems.” “If I need to know something about the world, I can ask my parent about it.” “If I need help with my school work, I can ask my parent about it.” “If I need help in getting somewhere, I can ask my parent for a way to get there.” “If I have a problem with my health, I think I can talk to my parent about it.” “If I am feeling bored, my parent has suggestions about things to do.” “If I am having a problem with a friend, my parent would have advice about what to do.” Socio-emotional items were: “I can share my feelings with my parent.” “I feel that I can trust my parent as someone to talk to.” “When I feel bad about something, my parent will listen.” “If I talk to my parent, I think they try to understand how I feel.” “When I talk to my parents, they make me feel better.”

Social desirability. Students were asked four questions “Have you failed to keep a promise?” “Have you told a lie to someone?” “Have you been late for school, a meeting, an appointment, etc.?” “Have you done something that your parents did not want you to do?” with regard to the preceding year (2009) and with regard to the year before that (2008). Questions and scoring followed (Mak, 1993). Specifically, “never” response was coded as a ‘1’ and across the eight items the ‘1’ responses were summed to obtain a social desirability score which ranged from 0 to 8, $M = 2.7$, $SD = 2.6$ ($\alpha = .88$). High scores meant more social desirability responding. These items were embedded in other questions about delinquency which were the focus of the District Anti-drug Addiction Community Consortium study and included in current analyses.

Demographics. Age ($M = 14.8$ years, $SD = 1.8$ years), gender (53% boys, 46% girls, 1% who did not report their gender) and monthly allowance ($M = 2.7$ $SD = 1.4$) were obtained. Age distribution was 50% 12-14, 41% 15-17, 9% 18-20. Allowance ranged from 1 = none, to 8 =

more than HK\$3,000 (US\$400) using a scale adapted from Currie et al.(1997).² Monthly allowance is a measure of the financial resources children receive from parents (Ridge, 2002) and has been used as a proxy for family economic support (Shah, Syeda, & Bhatti, 2012)

Analysis Plan

Prior to analysis, questionnaires were examined for patterns that would indicate that participants had withdrawn their willingness to participate. The criteria were excessive skipping (skipping more than 30% of questions) and excessive repeats (giving the same answer in a row to more than 30% of the items of the questionnaire). Using these criteria, 2.6% of questionnaires were omitted from subsequent analysis.

The current study predicted an effect of parental support on content of possible selves, having strategies to attain possible selves and on the perceived likelihood of attaining possible selves. However, data are correlational so that it is useful to compare the hypothesized models with the alternative reverse models in which possible selves (content, strategies and likelihood) influence rated parental support. To do so we used Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) as model comparison indexes. The AIC and BIC of our hypothesized models of parental socio-emotional and pragmatic support on likelihood of hoped for or feared possible selves ranged from 55424 to 56327, while the AIC and BIC of alternative models of perceive likelihood on socio-emotional or pragmatic support of hoped of and feared possible selves ranged from 60508 to 60933. In addition, the AIC and BIC of hypothesized

² Intermediate points were 2 = under HK\$500 (US\$70), 3 = HK\$500-999 (US\$70-140), 4 = HK\$1,000-1,499 (US\$140-210), 5 = HK\$1,500-1999 (US\$ 210-280), 6 = HK\$2,000-2,499 (US\$ 280-350), 7 = HK\$2,500-2,999, (US\$ 350-400). Scale points were set according the feedback of a pilot study and in consultation with the youth advisory group working with the larger study so that the range would fit the amount of monthly allowance children in Hong Kong receive. In Hong Kong, parents provide a monthly allowance for school children's transportation, meals, school-related functions, social activities and entertainment.

models on having at least one strategy (which ranged from 55424 to 56327) were smaller than those of the alternative models (which ranged from 60508 to 60933). The AIC and BIC of hypothesized models on the content of possible selves (which ranged from 52187 to 53398) were also smaller than those of the alternative models (which ranged from 54911 to 55205). These comparisons support the predicted direction of effect over the reverse direction of effect. Given that the hypothesized models were supported by the data, we proceeded to detailed analyses of the effects of parental support when taking into account other relevant variables as detailed next.

To examine the effect of perceived parental pragmatic and socio-emotional support on students' possible selves, we used generalized linear mixed models and linear mixed models. Standard errors, confidence intervals and statistical significance were assessed through bootstrapping with 2,000 resampling (Efron, 1979, 1981; Efron & Tibshirani, 1993). Statistical analyses were conducted in R (R Development Core Team, 2012) with the lme4 library (Bates, Maechler, & Bolker, 2011).

The possible selves (dependent) variables of interest were (1) having school and career focused possible selves, (2) having feared drug use and risk focused possible selves, (3) likelihood of attaining hoped-for possible selves, (4) likelihood of avoiding becoming like feared possible selves, (5) having strategies to attain hoped-for possible selves, (6) having strategies to avoid feared possible selves. In addition to the main predictors, parental pragmatic and socio-emotional support, we included demographic control variables (gender, age, allowance, social desirability score, and drug use) which might influence either content or likelihood of attaining possible selves or ability to articulate a strategy to attain one's possible selves. For this reason, we also included teen reports of parent and peer influence on their hoped-for and feared possible selves. Finally, we took into account that children may only focus on strategies to attain possible

selves that feel likely and conversely that possible selves may feel more likely if one is doing something about attaining them and included the likelihood variables in the strategies models and the strategies variables in the likelihood models as detailed below.

Table 1 provides descriptive information (means and standard deviations for continuous variables, percentages for categorical variables) and correlations for each of these variables³. As can be seen in Table 1, correlations among the six possible selves measures are mostly low, significant and in the expected direction. Only one correlation was higher, the correlation between having at least one strategy to attain a hoped-for possible self and having at least one strategy to avoid a feared possible self was $r = .66$. We decided not to use this correlation as a reason to collapse the strategies variables to facilitate closer examination of similarities and differences in patterns of prediction of having strategies to attain hoped-for and to avoid feared possible selves.

Turning to the predictor variables, as can be seen in Table 1, correlations among predictors are low, with the exception of the parent and peer influence measures which are significantly correlated with each other (r s range from .24 to .70) and the pragmatic and socio-emotional support measures which are correlated at $r = .76$. Since highly correlated predictors might result in multicollinearity in model fitting, we examined the variance inflation factors (VIF) for socio-emotional and pragmatic support in the four fitted models which ranged from 1.3 to 1.6, well below the typical cutoff point of 10, therefore, all predictor variables were included in analyses.

³ Pearson, Polychoric and Polychoric correlations were computed between continuous variables, between categorical (dichotomous or ordinal) and continuous variables, and between categorical variables respectively.

Our first two models examined predictors of content of possible selves, looking at predictors of having the most common hoped-for (school-career) and feared (drug-risk) possible selves. Our next two models examined predictors of having or not having strategies to attain hoped-for and to avoid feared possible selves. Because the strategy analysis was not specific to a particular content domain, we followed up with models predicting having or not having a strategy for each of the two most common contents of possible selves, i.e., school focused and career focused hoped-for possible selves. Since predictions were binary in each case, we were able to show results as odds ratios (OR) of predictors.

Our final models examined predictors of perceived likelihood of attaining hoped-for and avoiding feared possible selves. Since this is a continuous result, betas are presented. We began with two general analyses predicting likelihood of attaining hoped-for and feared possible selves and then we followed up with models predicting likelihood of attaining school focused and career focused hoped-for possible selves.