

*Empirical*

# The Discrepancies Between Individual-Set and Parent-Set Career Goals Scale: Development and Initial Validation

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[journals.sagepub.com/home/jcd](https://journals.sagepub.com/home/jcd)**Dian R. Sawitri<sup>1,2</sup> , Peter A. Creed<sup>3</sup> , and Mirwan S. Perdhana<sup>2,4</sup>**

## Abstract

As there was no existing, psychometrically sound scale that directly assessed the discrepancies that young people experience between individual-set career goals and parent-set career goals, we developed and provided initial validation for a 15-item scale for use with young adults. In Study 1, items were developed, reviewed by experts, and administered to a sample of first year, undergraduate Indonesian students ( $N = 426$ ,  $M_{\text{age}} = 18.42$  years). We used exploratory factor analysis to reduce the number of items and assess the factor structure and used confirmatory factor analyses on a holdout sample to assess this underlying structure. We then provided evidence for construct validity. Recommendations for use in research and practice are discussed.

## Keywords

career goals, discrepancies, parents, scale development, young people

A common source of intergenerational conflict between parents and their children is disagreement over career decisions (Leong et al., 2004; Rogers et al., 2018). For example, most young adults from Asian American families deal with parental disapproval when making career choices, which leads them to seek advice from others, apply strategies to educate their parents, and compromise their own desires for parental expectations (Ma et al., 2014). Consistent with this, Rogers et al. (2018) showed that the level of congruence between Australian adolescents and their parents on perceptions of the adolescents' career progress (in relation to career planning, exploration, decision certainty, and labor market knowledge) and level of vocational identity was only modest, suggesting that parents do not have a good perception of their children's career desires and progress, which could account for much adolescent-parent conflict.

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Congruence between children and their parents on career aspirations, values, and preferences is likely to facilitate young people's career development, while disagreements are likely to impede it (Leung et al., 2011; Sawitri & Creed, 2015, 2017). However, testing the relationships between adolescent–parent career goal discrepancies and important career and life variables (e.g., career self-efficacy, career aspirations, and life satisfaction) is difficult as there currently is no scale available to measure the construct. Thus, the aim of this study was to create a reliable and valid scale that could assess discrepancies between individual-set and parent-set career goals. Having such a scale is likely to facilitate research in this area, which will potentially increase our understanding of the different aspects of career goal discrepancies between young people and their parents, and generate more specific recommendations for improving interventions for young people who are struggling to set and achieve their career goals.

### *Career Goals and Conflict With Important Others*

Career goals are important for young people for several reasons. First, they guide actual career choice actions (Lent et al., 1994). Several theories (e.g., goal setting, Locke & Latham, 1990; reasoned action, Ajzen, 1988) have proposed links between goals and actions, and many studies have demonstrated that career goals play an important role in predicting choice actions (e.g., Lent et al., 2003). Second, career goals function as forerunners to actual career choices and action and later career and life success (e.g., Schoon & Polek, 2011). Through a complex set of processes and interactions, career goals enhance individual opportunities to acquire an advanced education, which in turn creates greater career possibilities in adulthood (Rojewski, 2005). Finally, career goal setting is a crucial development task in career preparation and vocational identity development (Erikson, 1968). As goals are dynamic structures that need to be redefined over time to fit and respond to realities (Brandtstädter & Rothermund, 2002), individuals become increasingly career mature, realistic, and adapted to their career goals as they develop (Armstrong & Crombie, 2000).

Young people believe that their parents should be involved when they formulate career goals (Tynkkynen et al., 2010), and they need to know that their parents are paying enough attention to them, are happy with their accomplishments, acknowledge their capacities, and trust them to make related decisions (Keller & Whiston, 2008). Conflict between parents and their children over career goals can disrupt a range of developmental tasks for young people, including career-related activities such as career exploration and decision-making. It can lead parents and children to both being distressed and dissatisfied and can disrupt educational processes, such as the child selecting courses and programs that are not suitable (Fouad et al., 2006; Ma et al., 2014). A smooth pathway through education and transition to the labor market improves student academic achievement, satisfaction, and later career success (Pina-Watson et al., 2014; Rienties et al., 2012). Therefore, it is important to understand the barriers that impede how young people decide upon and implement career-related goals as these affect many other aspects of their life (van Rooij et al., 2018). Confronted with discrepancies with parents regarding career direction and progress, young people are faced with protracted disputes with parents, disappointment, dissatisfaction, and having to adjust their goals (Anderson & Mounts, 2012).

In individualistic cultures, personal agency, and thus goal setting and pursuit, is located mostly within the individual, whereas in collectivistic contexts, personal agency is located largely in affirmative relationships with significant others, primarily parents (Kitayama & Uchida, 2005). The private selves of collectivists are also much more likely to reflect goals of conformity and obedience to the family or group. When individuals in collectivist cultures make a career decision, they do so with the interests and values of others in mind as well as their own interests. Satisfying significant others (e.g., parents) is likely also to contribute to pleasing and satisfying themselves (Leong et al., 2011).

Kim and Markus (1999) demonstrated that individuals from collectivistic backgrounds were more likely to make choices that indicated a preference for conformity, whereas their individualist

counterparts preferred choices that represented uniqueness. Likewise, career development studies have shown that collectivist adolescents are more willing to follow their parents' wishes such as selecting careers consistent with their parents' advice rather than ones that represent their own choices (Tang, 2002). As young people are likely to consider the needs and desires of significant others in addition to their own when making important decisions (Cross et al., 2000), ignoring the wishes of parents when formulating career goals is contrary to their sense of self and value system (Leung et al., 2011).

Career goal tensions due to conflict between young peoples' personal career goals and those desired for them by their parents are related to poorer career progress such as higher career indecision, a more dependent career identity (Ma & Yeh, 2005), and more career decision-making difficulties (Leung et al., 2011). More generally, career-related discrepancies and career goal tensions between young people and their parents are related to a poorer quality parent-child relationship (Onifade et al., 2016; Tang, 2002), especially when the child has to sacrifice personal aspirations to satisfy parental expectations (Yeh & Bedford, 2004). Discrepancies also result in poorer well-being (L.-F. Wang & Heppner, 2002), higher depressive symptoms (Gallagher, 2016), and more delinquent behaviors (Onifade et al., 2016).

### *Social Cognitive Career Theory and Goal-Setting Theory as Frames of References*

From the perspective of social cognitive career theory (Lent et al., 1994, 2000), individual-parent career goal discrepancies are contextual influences, which can be both distal and proximal. Distal influences, such as opportunities to develop skills and the availability of career-related role models, occur before periods of active decision-making and affect the development of efficacy beliefs (e.g., regarding capacity to deal with career-related activities), the expectations from engaging in these career-related activities, and the interest in these activities. Proximal influences, such as the availability of desirable jobs and the financial support to enter certain career paths, affect active career choice making. They do this, first, by affecting the individual's ability or willingness to translate career interests into goals and then to transform goals into actions; second, they come into play at critical career choice junctures when they can exert direct effects on career goal choice and actions, such as when individuals have to suppress their career preference to follow parental wishes (Lent et al., 1994, 2000).

Goal-setting theory (Carver & Scheier, 1990; Latham & Locke, 1991) emphasizes how goals regulate, and are regulated by, individuals' cognitive, affective, motivational, and behavioral processes. According to this theory, individual-parent career goal discrepancies disrupt goal pursuit and future goal achievement. As individuals set goals and take goal-directed actions, they actively seek and monitor feedback from their external (e.g., parents) and internal environments (e.g., their own reflections) and because of this feedback adjust their goals and goal-pursuit actions (Bandura, 1989). Feedback from family and in-groups is a powerful moderating force in these processes, especially in collectivistic contexts. L.-F. Wang and Heppner (2002) demonstrated that the degree to which collectivist students lived up to parental expectations served as a better predictor of reduced psychological distress than perceived parental expectations alone, and Leung et al. (2011) showed that collectivistic students who were more likely to fulfill parental expectations dealt better with career choice issues than those who felt they had gone against their parents' wishes.

### *Previous Measures of Individual-Parent Career-Related Discrepancies*

A widely used approach in studies on informant discrepancies relies on the computation of difference scores (i.e., subtracting one informant report from another such as subtracting adolescent scores from those of parents; Nelemas et al., 2016). These have been used to assess discrepancies between parent and adolescent perceptions of the parent-adolescent relationship (Nelemas et al., 2016) and compare children's vocational aspirations and their parents' expectations (Hou & Leung, 2011). Y. Wang and

Benner (2014) derived difference scores based on the young person's educational expectations and those of their parents and found that higher discrepancies were related to lower academic achievement, and Rutherford (2015) found that higher child–parent educational discrepancies of this type were related to poorer well-being in children.

A second method to assess discrepancies is to ask informants about their own aspirations and their perceived aspirations that others have for them. Radhakrishnan and Chan (1997) asked collectivist and individualistic participants to rate the 10 most important goals that they had for themselves (self-set goals) and the 10 most important goals they perceived their parents had for them (parental goals) and subtracted one from the other to create discrepancy scores. The individualistic students rated their own goals as more important, while the collective students regarded their own and their parents' goals as equally important. Further, personal–parent goal discrepancies were related negatively to subjective well-being in the collectivist students, whereas well-being of the individualistic students was related negatively to discrepancies between personal goals and parental approval of these goals. More recently, Gallagher (2016) assessed college aspiration discrepancies based on self and perceived parent expectation and found that college students perceived their parents to have higher college aspirations for them than they had for themselves and that higher perceived discrepancies were related to more depressive symptoms.

There has been a long debate in the literature related to the putative problems associated with the use of difference scores (Edwards & Parry, 1993; Edwards, 1994), which have been criticized, for example, for being unreliable and for reducing effect size (Edwards, 2001), and more recently, for having low validity (Laird & De Los Reyes, 2013). Despite these warnings, the case for the use of difference scores has been made (e.g., Gollwitzer et al., 2014; Trafimow, 2015), but the measures remain cumbersome to use and can result in negative as well as positive individual case scores. These criticisms have led researchers to assess differences directly. Using this approach, informants are asked for their perceptions of the difference between their position and the position of a second party (e.g., “My parents and I don't agree on what course I should undertake”). Studies using this approach have been conducted in a diverse range of areas, including discrepancies between desired and expected service orientation (Chung & Schneider, 2002), language use and preference (Tannenbaum, 2003), and perceived self and brand “personality” (Jie et al., 2012).

The Living up to Parental Expectations Inventory (L.-F. Wang & Heppner, 2002) was devised to measure whether adolescents perceived themselves to be able to live up to parental expectations in personal maturity, academic achievement, and dating concern areas. This scale contains questions with two response options: one assessing self-expectations and the other assessing perceived parental expectations. For example, to the career-related statement, “Parents expect me to study hard to get a high-paying job in the future,” responses to two questions are rated: “How strong do you currently perceive these expectations from your parents?” and “To what extent do you currently perform in this manner?” Individual discrepancy scores are then computed by subtracting the perceived parental expectations ratings from the self-ratings, which are then summed.

In the career domain, Sawitri et al. (2013) developed a direct measure of the congruence between adolescents and their parents on levels of career exploration, planning, and goal setting, whether adolescents perceive their career-related needs to be met by parents and whether the parents were satisfied with the progress being achieved (e.g., “I am interested in the career areas that my parents expect me to enter”). Creed and Hood (2015) developed a 12-item scale to assess the perceived discrepancies between the person's desired career-related goals (*vis-à-vis* level, effort, self-standard, and ability) and actual progress being made to achieve the goals (e.g., “I thought I had the ability to get the career I want, but now I am not so sure”). Last, Creed and Gagliardi (2015) devised a six-point scale to assess the perceived discrepancy between desired and actual career goals (e.g., “To what extent do you feel your current career direction is a compromise on the status you really wanted to have”).

From this overview, it can be concluded that previous scales (a) compare children's aspirations and their parents' expectations in the career (Hou & Leung, 2011) and educational domains (Y. Wang & Benner, 2014), (b) compare important goals that young people have for themselves and important goals they perceive that their parents have for them (Radhakrisnan & Chan, 1997), (c) compare college aspiration discrepancies based on self and perceived parent expectations (Gallagher, 2016), (d) compare self and perceived parental expectations (L.-F. Wang & Heppner, 2002), (e) measure congruence between adolescents and their parents on career matters (Sawitri et al., 2013), and (f) measure perceived discrepancies between desired career-related goals and actual progress being made to achieve those goals. We draw on these scale development approaches to devise a scale that assesses respondents' perceived differences between their own and their parents' career goals. As previous research has already identified meaningful underlying domains of the career discrepancies construct, we assess perceived discrepancies in child's ability, choice, and enthusiasm (Creed & Hood, 2015).

### *This Study*

We followed classic scale development procedures (DeVellis, 2016) to develop and initially validate a scale to measure discrepancies between individual and perceived parent career-related goals. Focus group discussions with undergraduate students confirmed the discrepancy domains identified in the literature that should be covered by the scale. Items were rated by four experts to support their content validity, and item and exploratory factor analyses (EFAs) were conducted on one half of our data to reduce the initial list of items to 15 and determine the underlying structure, and confirmatory factor analyses (CFAs) were conducted on the holdout sample. Reliability and initial validity of the final measure were then assessed.

### *Phase I—Item Development*

The aim of this phase was to generate sufficient initial items to allow any poorly functioning items to be discarded later (i.e., generate approximately twice as many as would appear in a final scale; Hinkin, 1998; Kline, 2000). Items were generated after a review of the literature (e.g., Gallagher, 2016; Ghosh & Fouad, 2016) and conducting four focus groups (led by first and third authors;  $N = 36$  first-year students from a university in Central Java, Indonesia; approximately 9 students per focus group). Conducting focus groups with individuals from the target population enhances content validity of the items and helps validate the underlying domains of the construct (Vogt et al., 2004). Students were asked to talk about their own career goals, their parents' career goals for them, the ways in which their career goals were discrepant from their parents, how these discrepancies might affect their willingness to achieve their career goals, the amount of energy they allocate to make career progress, and how career matters affect their well-being. The focus groups were recorded for later analysis.

From the literature review, focus groups, and with reference to other career discrepancy measures, we confirmed three broad domains of discrepancy: differences in individual and parent perceptions of ability (e.g., to complete requisite education programs), choice (e.g., over the career direction chosen), and enthusiasm (e.g., amount of energy expended on progressing career direction). We then generated 24 positively worded items (i.e., positively worded to reduce response bias; Salazar, 2015), which were written in English, to represent these three domains. All items were then shown to four independent reviewers who were experts in career and test development. They were asked to rate the suitability of each item to reflect a particular domain of the construct and to make comment regarding phrasing and readability. After feedback from the experts, some item wording was adjusted, and all items were retained.

We then used a standard forward and backward translation procedure (Jones et al., 2001) to convert the 24 items into the Indonesian language. The first and the third authors (Indonesian nationals who also spoke English) translated the items into the Indonesian language, and the items were then blindly back-translated into English by two Indonesian speakers, who also spoke English. The back-translated version was compared with the original English version for precision of meaning and adjusted when required. Last, the final Indonesian language scale was piloted with three Indonesian undergraduate students to assess readability.

## Phase 2—Item Analysis and EFA

The aim of this phase was to identify items to be retained in the scale using item analysis and EFA.

## Method

### Participants

We obtained data from 426 first year undergraduate students who were recruited from a state university in Semarang, Central Java, Indonesia. We divided this larger sample into two subsamples using a random split procedure. This procedure created a holdout sample that was used for cross-validation. This tests how well the original model can be generalized and guards against sample-specific bias and threats to reliability and validity if scale development is based on one sample only (Byrne, 2010).

Sample A contained 231 participants (67.5% young women; mean age 18.45 years,  $SD = .52$ ) who reflected the population in the university's economics and business (59.7%) and social science (40.3%) disciplines. This sample was used for item analysis and EFAs (Phase 2). Sample B contained 195 students (70.3% young women; mean age 18.37 years,  $SD = .65$ , from economics and business (52.8%) and social science disciplines (47.2%). Sample B was used for the CFAs in Phase 3.  $\chi^2$  and  $t$ -test analyses found no differences between the two samples on any of the demographic variables (age,  $p = .65$ ; gender,  $p = .37$ ; discipline,  $p = .06$ ; Grade Point Average [GPA],  $p = .65$ ), suggesting no bias as a result of the random split.

### Materials

The 24 discrepancy items were administered along with two scales to test for validity: the Adolescent–Parent Career Congruence Scale and the Career Distress Scale. As the Adolescent–Parent Career Congruence Scale assesses the level of agreement between adolescents and parents regarding career matters, we expected this scale to be associated negatively with the Individual–Parent Career Goal Discrepancies Scale. Career congruence between adolescents and their parents has been shown previously to be associated positively with life satisfaction (Sawitri et al., 2013), whereas lack of fit has been demonstrated to be correlated negatively with well-being (L.-F. Wang & Heppner, 2002). Thus, we expected discrepancies between individual-set and parent-set career goals to be associated positively with career distress.

**Discrepancies between individual and parent-set career goals.** This was assessed using the 24 items generated in Phase 1. These items were expected to reflect three domains of individual–parent career goal discrepancies of ability, choice, and enthusiasm. Example items were “I don’t think I can meet the requirements for the career my parents want for me” (ability), “My parents encourage me to pursue a career that I don’t really want” (choice), and “I am not seriously trying to achieve the career my parents want for me” (enthusiasm). The students were asked to respond to each item using a Likert-type format, with options that ranged from 1 (*strongly disagree*) to 6 (*strongly agree*). Higher scores indicate greater discrepancy.

**Adolescent–parent career congruence.** We used the 12-item Adolescent–Parent Career Congruence Scale (Sawitri et al., 2013), which measures perceptions that parents are supportive and satisfied with the student’s career-related actions and progress (e.g., “My parents are satisfied with the effort I have put in so far to achieve my career goals”), and perceptions that the student and parents have similar career values, interests, aspirations, and plans (e.g., “My parents and I have the same way of defining career success”; 6-point scale of 1 = *strongly disagree* to 6 = *strongly agree*). Higher scores indicate higher levels of career congruence with parents. Cronbach’s  $\alpha$  was reported as .89, and validity was supported by finding positive correlations with measures of vertical and horizontal collectivism, self-efficacy, and career aspirations (Sawitri & Creed, 2017).

**Career distress.** This was assessed using the 9-item Career Distress Scale (Creed et al., 2016), which taps levels of subjective distress in relation to career decision-making and career goal-setting (e.g., “I often feel down or depressed about selecting a career” and “I feel stress or pressure to select a satisfying career”; 6-point scale of 1 = *strongly disagree* to 6 = *strongly agree*). Higher scores equate to more distress. Previous research has reported high internal reliability ( $\alpha = .90$ ) and support for validity by finding positive associations with negative affect and negative associations with positive affect (Creed et al., 2016).

## Procedure

All scales, together with demographic questions (e.g., age, gender, and discipline), were administered to students in class time on campus. The study was conducted with approval from the authors’ university ethics committee, and written permission was obtained from the participating university departments and all students in the study.

## Results

### Item Analysis

To identify poor functioning items, we examined item skew and kurtosis, the interitem correlations (where  $r \geq .80$ , items were marked for deletion), and item-total correlations ( $r < .30$ ) and then assessed if participants responded differently to any items according to gender, age, and department (Kline, 2000). No items were identified as problematic; therefore, we did not remove any items at this stage.

### EFA

The Kaiser–Meyer–Olkin measure of sampling adequacy (.92) and Bartlett’s test of sphericity ( $p < .001$ ) indicated that the 24 items in Sample A were suitable for factor analysis. We used common factor analysis (EFA; i.e., principal-axis factor analysis), as the common variance is of interest in determining the underlying factor structure (Hair et al., 2010). As the three anticipated factors were expected to be correlated domains of an overall individual–parent career goal discrepancies construct, we utilized a direct oblimin rotation (Hair et al., 2010). Following Patil et al. (2008), we used a combination of decision rules to determine the number of factors to be retained: eigenvalues  $> 1$ , Velicer’s Minimum Average Partial (MAP) test, parallel analysis (O’Connor, 2000), a minimum of 3 items per factor (Costello & Osborne, 2005), and interpretability of factors (Hinkin, 1998).

The first EFA produced four factors with eigenvalues  $> 1$ , which accounted for 62.95% of variance. However, Velicer’s MAP test, the scree plot, and the parallel analysis suggested a three-factor solution. These 3-item groupings were interpretable theoretically; therefore, three factors were accepted. Subsequently, 9 items were removed from the solution as the factor loadings were  $< .4$  and/or less than twice as strong on the appropriate factor as on another factor (Hinkin, 1998). The final 15 items

**Table 1.** Factor Loadings for Discrepancies With Parent-Set Career Goals Scale; Sample A.

Items	Factor 1: Ability	Factor 2: Choice	Factor 3: Enthusiasm
1. I don't think I can meet the requirements for the career my parents want for me.	<b>.93</b>	-.07	.03
2. I don't think I have what it takes to reach the career my parents think I should pursue.	<b>.83</b>	.06	.06
3. I am not as clever as I need to be to reach the career my parents want for me.	<b>.83</b>	.02	-.07
4. I am not sure that I have the ability to strive for the career my parents think is ideal for me.	<b>.82</b>	.04	-.04
5. I doubt that I am able to reach the career my parents think is best for me.	<b>.82</b>	-.03	-.06
6. My parents have a preferred career for me as they disagree with the choice I have made for myself.	-.01	<b>.93</b>	.07
7. My parents want me to change my own career choice to the career they really want for me	-.08	<b>.82</b>	-.08
8. My parents insist that the career they want for me is better than my own career choice.	-.03	<b>.79</b>	.02
9. My parents believe that my own career choice is not good enough.	.01	<b>.77</b>	-.05
10. My parents encourage me to pursue a career that I don't really want.	.11	<b>.53</b>	.01
11. I am not motivated to reach the career my parents want me to have.	-.10	.04	<b>.95</b>
12. I am not enthusiastic about achieving the career my parents want for me.	.01	-.02	<b>.88</b>
13. I am not interested in making an effort toward the career my parents want me to have.	.10	-.02	<b>.78</b>
14. I am not seriously trying to achieve the career my parents want for me.	.01	-.03	<b>.73</b>
15. I am not working as hard as I could to achieve the career my parents want me to have.	.17	.12	<b>.63</b>
Eigenvalues	7.28	2.65	1.25
% variance explained	46.62	15.49	6.47

Note.  $N = 231$ . Main loadings highlighted in bold.

accounted for 68.58% of the variance: Factor 1 = 46.62%, Factor 2 = 15.49%, and Factor 3 = 6.47%. See Table 1 for factor loadings and eigenvalues.

Factor 1 (5 items; labeled "ability discrepancies") reflects the situation where individuals perceive that their abilities cannot meet the requirements for achieving parent-set career goals ( $\alpha = .85$ ,  $M = 32.77$ ,  $SD = 5.01$ ). Factor 2 (5 items; "choice discrepancies") captures the individual's belief that their own career goals are different from the career goals their parents have for them ( $\alpha = .84$ ,  $M = 20.89$ ,  $SD = 4.41$ ). Factor 3 (5 items; "enthusiasm discrepancies") reflects lack of motivation to achieve parent-set career goals. The associations among the three factors (.37, .41, and .69; all  $p < .001$ ) were consistent with the results from the EFA and indicated that the subscales were somewhat independent, but with overlap among them. Full scale  $\alpha$  was .92.

### Phase 3—CFAs

The objective of this phase was to confirm the factor structure of the Individual-Parent Career Goal Discrepancies Scale using Sample B. By means of CFA (AMOS Version 4.0; Arbuckle & Wothke, 1995), we tested the three-factor structure identified in Phase 2 (i.e., ability, choice, and enthusiasm factors) and then compared this model with a one-factor model, a hierarchical, second-order model, and a bifactor model (Reise et al., 2013; van Prooijen & van der Kloot, 2001). A bifactor model



**Table 2.** Model Fit Indices of the Three-Factor, One-Factor, Second-Order Factor, and Bifactor Models for Sample B.

Model	$\chi^2$	df	$\chi^2/df$	CFI	TLI	RMSEA	$\chi^2_{Diff}$	AIC
Three-factor	142.45***	75	1.90	.97	.97	.06	—	232.45
One-factor	1,182.13***	90	13.14	.57	.50	.25	$p < .001$	1242.13
Second-order	1,111.10***	77	1.44	.99	.98	.05	$p < .001$	197.10
Bifactor	70.32***	64	1.10	.99	.98	.02	$p < .001$	182.32

Note.  $N = 195$ . CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; AIC = Akaike information criterion.  $\chi^2_{Diff}$  statistics refer to differences with three-factor model.

\*\*\* $p < .001$ .

assesses the extent to which the relationships among items can be explained by a general factor and a set of group factors that are alike in content (Rodriguez et al., 2016).

Model fit was examined using the  $\chi^2$  statistic, normed  $\chi^2$  ( $\chi^2/df$ ), comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA). A significant  $\chi^2$ ,  $\chi^2/df < 3.0$ , CFI and TLI values  $> .95$ , and RMSEA  $< .08$  indicate acceptable fit when participants  $< 250$  and observed variables are between 12 and 30. We compared the different models using the  $\chi^2$ -difference test and the Akaike information criterion (AIC), where the lower value indicates a better fit (Hair et al., 2010).

The three-factor model identified in Phase 2 generated acceptable fit statistics (see Table 2 for fit statistics for all models). All factor loadings were significant ( $p < .001$ ) and ranged from .85 to .93 (ability), .67 to .87 (choice), and .84 to .95 (enthusiasm); correlations among latent variables ranged from .43 to .59. The second-order model (correlations with second-order factor = .59 to .82) and bifactor model also had satisfactory fit statistics, but the one-factor model did not. The best fitting model was the bifactor model, which was statistically different from the three-factor model and had the lowest AIC. The bifactor model contained a general latent variable (i.e., dependent on all 15 items) plus three subscale latent variables identified in Phase 2 (i.e., three factors each dependent on their respective 5 items). This model assumes that each item is an indicator of both a global and subscale dimension, with the results for the global variable representing common sources of variance after controlling for subscale variances, and the subscale variables representing variances after controlling for the global variance (Reise et al., 2013).

Following recommendations by Rodriguez et al. (2016a; also see Rodriguez et al., 2016b), we examined the bifactor reliability estimates using the Bifactor Indices Calculator (Dueber, 2017) to calculate  $\Omega$ ,  $\Omega_H$ , Relative  $\Omega$ , and the explained common variance (ECV).  $\Omega$ , which is the model-based reliability coefficient, was .96 for the general factor, and for the specific factors was .94 (ability), .88 (choice) and .93 (enthusiasm), indicating high reliability for all factors.  $\Omega_H$ , or the unique variance explained, was .76 for the general factor, and .38, .70, and .11, respectively, for the specific factors. Relative  $\Omega$  (i.e., the proportion of reliable variance in the multidimensional composite) was .79 for the general factor, and .41, .79, and .12 for the specific factors. These statistics indicated that the majority of reliable variance was represented best by the general factor. Finally, ECV, or the proportion of common variance explained, was .57 for the general factor, and .15, .23, .05 for the specific factors, suggesting a moderately strong global factor, with much less variance explained by the specific factors. While our results supported multidimensionality of the Individual-Parent Career Goal Discrepancies Scale (i.e., three-factor, second-order, and bifactor models all had satisfactory fit statistics, whereas the one-factor model did not), analysis of the bifactor statistics suggest that interpretation at the global level will give a more useful measure of discrepancies between individual-set and parent-set career goals, as the global factor accounts for more meaningful variance.

**Table 3.** Summary Data for Sample B.

Scale	M	SD	Range	$\alpha$	1	2	3	4	5	6
1. Full scale	34.50	12.62	14–77	.92	—	.85***	.75***	.79***	-.76***	.40**
2. Subscale 1 (Ability Discrepancies)	13.64	5.83	5–30	.95	—	—	.44**	.55**	-.56**	.49**
3. Subscale 2 (Choice Discrepancies)	10.57	5.07	5–30	.88	—	—	—	.37**	-.62**	.26**
4. Subscale 3 (Enthusiasm Discrepancies)	12.66	5.97	5–30	.94	—	—	—	—	-.65**	.17*
5. Adolescent–parent career congruence	54.36	10.15	17–72	.92	—	—	—	—	—	-.30**
6. Career distress	24.90	8.21	9–46	.87	—	—	—	—	—	—

Note.  $N = 195$ .

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### Phase 4: Construct Validity

The aim of this phase was to evaluate the initial construct validity of the scale by correlating scores from the Individual–Parent Career Goal Discrepancies Scale with scores from measures of adolescent–parent career congruence and career distress. We expected discrepancies to be associated negatively with congruence and positively with distress. These analyses were conducted on Sample B ( $N = 195$ ). All correlations were significant and in the expected directions, as reported in Table 3. The results indicated that the Individual–Parent Career Goal Discrepancies Scale scores were related to the two other constructs as expected, providing support for construct validity of the measure. We also demonstrated that the newly developed Individual–Parent Career Goal Discrepancies Scale ( $R^2 = .16$ ) and the subscales ( $R^2 = .26$ ) separately accounted for variance in distress over and above the variance accounted for by the Adolescent–Parent Career Congruence Scale ( $R^2 = .09$ ).

## Discussion

We developed and presented initial evidence of validity for a psychometrically sound, 15-item scale to measure discrepancies between individual-set and parent-set career goals. We operationalized individual–parent career goal discrepancies as disparities between adolescent-set and parent-set career goals, which incorporated discrepancies between the individuals' perceived ability to meet parent-set goals, the choice of career goals, and enthusiasm for meeting parent-set career goals. Content validity was supported by a review of the literature, focus groups, pilot testing, and use of expert reviewers. Construct validity was supported by the EFAs and CFAs, which indicated that the new measure reflected the three intercorrelated domains (i.e., ability, choice, and enthusiasm discrepancies). We also provided evidence that the Individual–Parent Career Goal Discrepancies Scale might more meaningfully be interpreted at the full-scale level and that at this level it was internally reliable. Additionally, the association with the Adolescent–Parent Career Congruence Scale supported divergent construct validity, and the association with the Career Distress Scale supported convergent validity.

Previous research has demonstrated the importance of career-related discrepancies between young people and their parents (e.g., Leung et al., 2011). This study provides a comprehensive measure of career discrepancy, which assesses multiple aspects of the individual–parent career goal discrepancies construct. At 15 items, the Individual–Parent Career Goal Discrepancies Scale will be practical and convenient to use when a short scale of important discrepancies between individual-set and parent-set career goals is needed in future research and practice.

### *Implications for Research and Practice*

Researchers have been hindered by the lack of an adequate scale in this area. Extending career discrepancies research using this scale has the potential to add to our understanding of adolescent–parent disagreement/agreement in formulating and achieving career goals. This can be done by extending current knowledge about the nature of disparities between individual self-set career goals and their parents' set career goals for their children and identifying the precursors and consequences of discrepancies, especially the long-term consequences related to career progress, achievement, and satisfaction.

The Individual–Parent Career Goal Discrepancies Scale also will be of use to practitioners who work with young people on their career choice issues to optimize their career development. Practitioners can use the scale as a screening tool at an early stage of career counseling, as well as an evaluation instrument after a series of counseling sessions, at the end of a career intervention program, or after goal setting and goal actualization processes. For example, when adolescents experience career distress at the beginning of a career counseling, counselors can probe whether one of the sources of the problem is discrepancies between the adolescents' own goals and their parents' goals for them. Then, counselors can explore the background to these discrepancies, whether it is an ability, choice, or enthusiasm component, and how they influence decisions related to career development. Starting here, counselors can then potentially explore how these aspects influence the young person's life and parental relationships.

### *Limitations*

In the scale development process, we used samples of first-year Indonesian university students. While people in individualistic cultures are primarily motivated by their own needs, individuals in collectivistic cultures (e.g., in Indonesia) are socialized to be more responsive to their in-group preferences (Oettingen & Zosuls, 2006). They are taught to maintain harmony and to protect important relationships with others by avoiding behaviors that could threaten the connection (Cross et al., 2000). Therefore, individuals, especially young people, are motivated to fit in and adjust themselves to their significant others' expectations and needs, especially the expectations and needs of parents (Kitayama et al., 2007). Thus, generalization of the scale to other collectivistic and individualistic groups of participants needs to be examined. Our samples also consisted of more young women than young men, and the use of the scale on more diverse populations needs to be investigated. As we did not test the predictive validity of the scale, future researchers should investigate the across-time associations between scores on the scale and later outcomes. We showed that the scale was unrelated to several demographic variables (e.g., age, gender), suggesting no inherent bias based on these characteristics; however, future studies using larger samples need to assess for structural invariance on these and other variables to confirm these results.

### **Conclusion**

In conclusion, the present research yielded support for an instrument to measure discrepancies between individual-set and parent-set career goals. Additional studies are needed to extend its nomological network and to examine whether the predictive use of the scale extends beyond its application to first year undergraduate students. We hope our findings contribute to the body of literature on young people's career development and lead to improved career counseling interventions, as the scale captures aspects of career goal discrepancies of ability, choice, and enthusiasm, which have not been assessed by previous measures.


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