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# From high school to workplace: investigating the effects of soft skills on career engagement through the role of psychological capital in different age groups

The effects of  
soft skills

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## 1 Abstract

**Purpose** – This study aims at investigating the indirect effect of soft skills on career engagement through the role of psychological capital (PsyCap) in different age groups. The social cognitive theory (SCT) and job demands-resource model (JD-R) were employed to explain the effect of perceived skill mastery on PsyCap and career engagement.

**Design/methodology/approach** – The data were collected from 707 high school students, 150 university students and 165 employees using a three-wave data collection technique. This study measured soft skills, PsyCap and career engagement at different age groups (i.e. high school students, university students and employees). The data were analysed using a moderated-mediation technique.

**Findings** – The results showed that soft skills positively influenced PsyCap and eventually increased career engagement in all age groups. However, the effect was stronger for students (both in high school and university) than employees in the workplaces. Unlike most students, employees related soft skills to performance. Regardless of the effect on performance, students would be more likely than employees to perceive soft skill mastery as a source of efficacy.

**Research limitations/implications** – First, the education system should direct more attention to developing students' non-cognitive skills. Second, people should understand that their career advancement continues in the workplace context. Organizations can foster employees' soft skills by providing more opportunities to develop new skills.

**Originality/value** – This study sheds light on the importance of soft skills beyond academic and workplace performance. This study is among the few empirical investigations that reveal career engagement factors across different career development stages.

**Keywords** Soft skills, Psychological capital, Career engagement, Students, Employees

**Paper type** Research paper

## Introduction

Career engagement has been studied for several years. Recently, it has received more attention from scholars in management and education (Bharti and Rangnekar, 2019; Luke and Neault, 2020; McIlveen and Perera, 2016) through studies that investigate the role of



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career engagement among employees in the workplace and factors affecting its development. Furthermore, career engagement should be viewed as a bridge between education and the workplace. Career engagement plays an essential role in directing individuals' self-development and engaging them in career-related activities (Hirschi and Freund, 2014). The continuation of career advancement has made career engagement a pivotal factor throughout human development stages. Consequently, some empirical studies have focused on investigating career engagement in different spheres, such as the organization (Le *et al.*, 2018; Lechner *et al.*, 2019; Luke and Neault, 2020) and education (Hirschi and Freund, 2014; Nilforooshan and Salimi, 2016; Upadyaya and Salmela-Aro, 2015) spheres. Nurturing career engagement throughout school years might provide significant support for later career advancement in the workplace (Neault and Pickerell, 2011; Sturges *et al.*, 2002; Upadyaya and Salmela-Aro, 2015; Thomas *et al.*, 2010).

Ideally, people prepare for their careers starting from school to higher education, and this preparation persists until people enter the workplace (Lent and Brown, 2013). There are tasks that people must accomplish throughout the school-to-work transition. A successful transition might grant people a successful career path, while an unfinished transition would cause people to struggle to find the right career path (Pinguart *et al.*, 2003). To ensure a smooth transition, individuals should advance their skills, adapt to new environments and prepare for challenges in schools, universities and workplaces (Krumboltz and Worthington, 1999; Tomasik *et al.*, 2009). Lent and Brown (2013) argued that students and employees should continuously develop new soft skills and maintain a positive psychological state to support a successful school-to-work transition.

Career engagement is essential for both students and employees (Hirschi and Freund, 2014; Nilforooshan and Salimi, 2016; Upadyaya and Salmela-Aro, 2015). Research on career engagement among students is still in its infancy. Although some recent studies empirically found the vital role of career engagement (Hirschi *et al.*, 2014; Hirschi and Freund, 2014; Nilforooshan and Salimi, 2016), little is known about how students engage in career-advancement activities. To advance the knowledge in this literature, the current study investigates two other factors that have been found necessary for academic achievement and work performance for students and workers, namely, soft skills and psychological capital (PsyCap). PsyCap has a positive influence on students' academic achievement and engagement (Datu and Valdez, 2016; Hicks *et al.*, 2015; Jafri, 2013; You, 2016) as well as employees' work engagement (Joo *et al.*, 2016; Saleh *et al.*, 2020; Tamar *et al.*, 2020; Wirawan *et al.*, 2020). In a similar vein, soft skills also positively influence students and employees (Cimatti, 2016; Cobb *et al.*, 2015; Deepa and Seth, 2013; Dewiyani, 2015; Ibrahim *et al.*, 2017; Robles, 2012).

Soft skills have been linked with career development (Sahin *et al.*, 2015; Majid *et al.*, 2012). In some stages, career development requires individuals to foster soft skills such as communication, problem-solving, self-motivation, decision-making and managerial skills (Rasheed and Jurdi, 2019; Succi and Wieandt, 2019). Siddiqui and Lokhande (2019) postulated that a set of soft skills could help students identify gaps between learning needs and workplace success. Nevertheless, the effect of soft skills on career advancement and engagement has not been firmly established in the literature. Some empirical studies claimed that soft skills are beneficial for the career development of students (Kim *et al.*, 2014; Haddad and Marx, 2018; Majid *et al.*, 2012; Riyanti *et al.*, 2017) and employees (Ibrahim *et al.*, 2017; Majid *et al.*, 2012).

Apart from soft skills, PsyCap also has a tremendous effect on both students and workers. PsyCap is a positive mental state characterized by hope, optimism, efficacy and resilience (Avey *et al.*, 2009; Luthans and Youssef-Morgan, 2017; Luthans and Youssef, 2004). This mental state potentially influences how individuals perceive the environment and encounters, consequently influencing their career engagement (Rogers *et al.*, 2008). Similar to soft skills,

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this area could be advanced by investigating the effect of PsyCap on career engagement, as most prior studies focused on the PsyCap–work engagement relationship (Costantini *et al.*, 2017; Karatepe and Avci, 2017; Thompson *et al.*, 2015; Wang *et al.*, 2017; Wirawan *et al.*, 2020). Luthans *et al.* (2007a, b, c) found that PsyCap contributed to students' career engagement in universities. However, the conjoint effect of other factors, such as the students' soft skills and individual differences, has yet to be addressed.

Responding to the findings of the research by Hirschi and Freund (2014), the present study investigates factors that influence the establishment of career engagement across different age groups. Following the previous discussion, soft skills and PsyCap are two prominent predictors for many desirable academic and work outcomes. Investigating the effect of soft skills and PsyCap on career engagement can potentially shed light on career engagement literature. Additionally, this study also investigates the moderating effect of age groups on the relationship. Each developmental stage (e.g. adolescence, adulthood) must deal with specific career development tasks (Lent and Brown, 2013). Adolescents (i.e. students) might focus on developing new soft skills while adults (i.e. workers) could exploit their soft skills for performance purposes (Schunk, 1984). This could determine the effect of perceived skill mastery (Bandura, 1977) on individual psychological states (e.g. efficacy).

## Literature review and hypotheses

### *The relationship between variables and hypotheses*

This study employed the social cognitive theory (SCT) (Bandura, 1977, 1988, 1989) and the job demands-resource (JD-R) model (Bakker and Demerouti, 2007, 2008; Schaufeli and Bakker, 2004) to explain the indirect effect of soft skills on career engagement through PsyCap at different age groups. First, this section will explain the effect of soft skills on PsyCap, and how it differs across the developmental stages using SCT. Second, JD-R will be used to grasp the influence of PsyCap on career engagement and the indirect effect of soft skills on career engagement.

SCT postulates that human psychosocial function operates in a triadic reciprocal relationship. In this relationship model, behaviour, cognitive and personal factors and environmental events interact to form a causal relationship with bidirectional influence (Bandura, 1988). To explain the bidirectional influence between functions, SCT adopted three so-called modes of agency: (1) direct, personal agency to influence function, (2) proxy agency (use of other resources to influence function) and (3) collective agency or work in a group to influence function (Bandura, 1989). Bandura emphasized the importance of personal agency in influencing human behaviours, environmental events and cognitive functions (Bandura, 1988). Human psychological mechanisms have a personal efficacy that can determine their belief before executing certain actions, manipulating events or adjusting personal factors. This self-efficacy belief regulates human functioning by influencing cognitive and personal factors and motivational, affective and decisional processes (Bandura, 2002). A total of four sources determine self-efficacy, namely, the experience of mastery, vicarious experience, verbal persuasion and physiological states (Bandura, 1977).

Soft skills have been viewed as the human capability to perform specific tasks in different areas. For example, Kantrowitz (2005) introduced seven major areas of soft skills, namely communication, performance management, self-management, interpersonal skills, leadership/organization, political/cultural and counterproductive skills. Cimatti (2016) suggested that soft skills are a set of personal competencies that support task completion, such as social aptitude, communication capability, teamwork and other traits that improve interpersonal relationships. Kyllonen (2013) stated that soft skills improve human capital quality and consequently enhance an individual's productivity. In short, the development of

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soft skills facilitates performance, increases the experience of mastery and engages people in work-related behaviours (Gibb, 2014).

A recent study found that the measure of soft skills could be organized into three different dimensions (Succi and Wieandt, 2019). The first dimension is personal skills that involve self-awareness, creativity, learning and tolerance to stress. The second dimension is social skills, which include communication skills, conflict management, leadership and teamwork. Lastly, the methodological dimension includes management skills, results orientation, analysis and decision-making skills. To illustrate, students who have high personal skills might better deal with learning tasks and tend to be more creative in solving problems. On the other hand, employees with methodological skills will approach organization-related issues with better decision-making tactics.

Furthermore, Luthans and Youssef (2004), Youssef-Morgan and Luthans (2015) defined PsyCap as a core construct of a positive psychological state with four dimensions (hope, optimism, resilience and self-efficacy). Hope refers to an individual's positive desire and expectation about the future although the future holds uncertainty, while optimism is an individual's belief that the future holds an expected and positive outcome. Resilience means one's psychological strength that helps an individual to bounce back after experiencing a failure. Self-efficacy is closely related to an individual's self-confidence or a belief about ability to solve a problem or respond to challenging situations. PsyCap is positively related to the desirable performance, attitudes and mental states of employees (Avey *et al.*, 2010; Larson and Luthans, 2006; Luthans *et al.*, 2007a, b, c; Nafei, 2015). Several lines of evidence also suggested that PsyCap improves student achievement (Datu and Valdez, 2016; Luthans *et al.*, 2012). Individuals with sufficient PsyCap tend to be optimistic, willing to struggle and engage in positive behaviours (Avey *et al.*, 2010; Luthans *et al.*, 2007a, b, c; Newman *et al.*, 2014; Youssef-Morgan and Luthans, 2015).

As illustrated by SCT, the performance and experience of mastery could become the source of self-efficacy. Possessing a certain level of soft skills or completing some tasks with required soft skills could become the source of self-efficacy. The more people believe that they have a set of soft skills or exercise those skills, the more likely it is for their efficacy to increase. Since PsyCap is considered a core construct of the four positive psychological states and its dimensions are synergetic (Luthans *et al.*, 2006, 2007a), the effect of soft skills potentially improves the core PsyCap impacts. Thus, the first hypothesis will be as follows:

#### *H1. Soft skills positively influence PsyCap.*

The JD-R model (Bakker and Demerouti, 2007, 2008; Schaufeli and Bakker, 2004) was initially used to explain employees' work engagement in the organizational context. However, the basic idea of this theory can also explain the determinants of career engagement. The JD-R model elucidates how people engage in their work-related activities while encountering demands at the same time. According to the JD-R model, people are more likely to engage with the task at hand if they have enough resources to accomplish demanding work (Bakker, 2011). In contrast, excessive demands and a lack of resources may lead to burnout (Hakanen *et al.*, 2006). Bakker and Demerouti (2008), Bakker and Demerouti (2007) and Schaufeli and Bakker (2004) proposed two types of resources, namely, job (e.g. organizational support, feedback and recognition) and personal (e.g. psychological resources). Several empirical findings have established that leadership and PsyCap serve as the two primary resources to help people engage in their activities (Avolio and Gardner, 2005; Saleh *et al.*, 2020; Wirawan *et al.*, 2020; Woolley *et al.*, 2011).

The JD-R model was employed to understand the effect of PsyCap on career engagement. In this study, personal resources were considered the most relevant resources across different age groups. Job resources are only relevant for individuals who have engaged in daily work routines. Unlike job resources, personal resources can foster as the individuals move from one

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to another life stage or from one context to another. Therefore, this study focuses on how personal resources influence the development of career engagement across different contexts (i.e. high school, university and the workplace). These different contexts represent different life stages and age groups. High school students are usually between 15 and 17 years old, university students are between 18 and 22 years old and people usually enter workplaces after graduating from university (i.e. 23 years old).

Career engagement is the extent to which an individual proactively advances their career (Hirschi, 2011, 2014; Hirschi *et al.*, 2011, 2014; Hirschi and Freund, 2014). In a similar vein, Vondracek *et al.* (2010) stated that career engagement is an effort to engage in proactive and variative behaviours to promote career success. Individuals with high career engagement seek information and opportunities, improve their skills and engage in career advancement activities (Hirschi, 2011; Hirschi *et al.*, 2014; Hirschi and Freund, 2014). Furthermore, Hirschi (2011) proposed that career engagement activities include career planning, career self-exploration, environmental career exploration, networking, voluntary human capital and skill development, and positioning behaviours. Further, career engagement is expected to emerge during high school years or adolescence (Ababneh, 2013) because it influences the subsequent career advancement in the workplace (Chetana and Mohapatra, 2017). Students who engage in career advancement activities will seek information related to their future career endeavours, engage in skill-improvement activities and willing to look for support from others, such as teachers or parents. Similarly, employees also engage in career advancement activities, such as locating some potential support for promotions, improve their skills and locate supports from supervisors or peers. All these activities are encouraged by their desires to advance their future career.

Personal and social support may predict career engagement (Rogers *et al.*, 2008). Focusing on personal attributes, personality traits, hope and optimism have been significant predictors of career engagement (Hirschi, 2014; Hirschi and Freund, 2014; McIlveen and Perera, 2016). On the other hand, Dopson *et al.* (2021) suggested that soft skills could predict the development of career engagement. Succi and Wieandt (2019) also argued that soft skills could be categorized into three dimensions: personal, social and methodological. In short, personal quality, which includes psychological states and skills, helps people engage in career-advancement activities.

As proposed earlier, soft skills positively predict PsyCap. The application of the JD-R model also indicated that PsyCap could act as an individual's psychological resource that promotes career engagement by providing support while people are dealing with demanding tasks or goal expectations from others (e.g. parents, teachers and supervisors). Thus, soft skills can directly predict PsyCap and career engagement, while at the same time PsyCap can also directly predict career engagement. Empirical evidence showed that soft skills (Sahin *et al.*, 2015; Majid *et al.*, 2012) and PsyCap (Luthans *et al.*, 2007a, b, c) are two strong predictors of an individual's career development. In other words, PsyCap potentially mediates the effect of soft skills on career engagement, which also could make PsyCap as a determining factor in the relationship between soft skills and career engagement.

By employing the SCT and JD-R theory, a new mediating mechanism can be developed to understand the role of PsyCap in the soft skill-career engagement relationship. The above theoretical arguments and empirical findings have suggested that soft skills can indirectly predict career engagement through the role of PsyCap. Evidence also indicated that soft skills could directly influence career engagement (Kim *et al.*, 2014; Haddad and Marx, 2018; Majid *et al.*, 2012; Riyanti *et al.*, 2017; Ibrahim *et al.*, 2017; Majid *et al.*, 2012). People can develop self-confidence and continuously engage in career advancement activities as they notice the positive impact of their soft skills. Also, effective soft skills allow them to implement some strategies, and these strategies increase successful accomplishments. Thus, soft skills can help people to engage in career-related activities.

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Although soft skills can directly predict career engagement, PsyCap plays essential roles in mediating the relationship. As previously argued, people need to experience the positive effect of their soft skills on their accomplishment before soft skills could impact career engagement. As explained earlier, PsyCap is a set of positive personal resources. The absence of these personal resources (e.g. optimism, efficacy) could hinder a sense of personal mastery and achievement (Luthans *et al.*, 2007a, b, c). In brief, people will highly engage in a career engagement if their soft skills enrich their perception of personal mastery. This personal mastery becomes the personal resources that support individuals to engage in career-related activities. Thus, PsyCap becomes an essential factor in the relationship between soft skills and career engagement.

After considering the above theoretical perspectives, this study argues that career engagement can be both predicted by soft skills and PsyCap. However, PsyCap will play an essential role by mediating the effect of soft skills on career engagement. This theoretical mechanism leads to the second hypothesis, as follows:

*H2.* Soft skills can directly predict career engagement or indirectly via PsyCap.

Drawing from the reciprocal relationship between functions in SCT, this study proposes that age groups moderate the effect of soft skills on PsyCap. According to the social cognitive model of career self-management (Lent and Brown, 2013), every individual must prepare a career path and develop career plans. This process takes place from schools and universities to the workplace. Students in a school may have a different academic environment compared to those in a university. Likewise, employees in workplaces face different challenges and environments compared to students from schools and universities. As people grow, they experience different career stages. Every age group has its environment, which potentially influences how individuals perceive abilities and demands.

SCT postulated that people's belief in their capabilities determines what career paths they would follow (Bandura, 1988, 1989, 2012). That is, the role of self-efficacy is profound in selecting paths for career advancement. Considering how people exercise soft skills in every age group, there could be some differences in how students and employees experience mastery. Employees may have more chances to observe the flaws in their competencies while working, which could be worsened by the absence of informative and constructive feedback (Bandura, 1988). Unlike employees, students constantly develop new skills, and teachers frequently encourage skill acquisition by conveying a sense of efficacy as students work on new tasks (Schunk, 1984). Regardless of the actual skills or performance, students may have a better chance of perceiving their effort as a successful performance.

On the other hand, employees are expected to show performance outcomes regardless of their efforts in the organizations. Therefore, as people move from schools to workplaces, they observe more performance failure. People tend to relate soft skills to work outcomes, and this influences a sense of efficacy. Students could perceive the acquisition of soft skills as a source of self-efficacy, which could consequently influence PsyCap. In contrast, for employees, soft skills must be evaluated using external factors (e.g. performance indicators and supervisors), and these factors are linked to performance success. This leads to the next hypothesis, as follows:

*H3.* The positive effect of soft skills on PsyCap is moderated by age group, in which the effect is stronger for students at the high school level than the higher age groups.

According to SCT and JD-R, soft skills can increase an individual's sense of efficacy and other positive psychological states. The heightening of positive psychological states (i.e. PsyCap) serves as a personal resource for those who face demanding circumstances. PsyCap can provide psychological resources for individuals who strive to accomplish demanding career aspirations, expectations of others and personal goals in terms of career advancement.

However, younger people (i.e. high school students) may perceive soft skills as vital sources of efficacy because teachers and the education system only demand learning efforts. In contrast, for older individuals (i.e. employees), soft skills must improve the expected work outcomes before they can be considered the source of efficacy. This leads to the final hypothesis, as follows:

- H4.* The indirect effect of soft skills on career engagement is mediated by PsyCap and moderated by age group, in which the effect will be stronger for students at the high school level than the higher age groups.

## Method

### Participants

Participants were high school students, university students and employees from various sectors. Invitations to participate in the study were sent to five high schools, three universities and four companies in South Sulawesi, Indonesia. The invitations were sent via social media groups, emails and alumni networks. Students from universities and employees who agreed to participate in the study completed the survey directly via an online survey webpage. For the high school students, the participation had to be approved by their parents or guardians before they completed the online survey. Parents or guardians were informed about the study, its risks and potential benefits to the students. They only responded to the email if they refused to participate in the study. Participants' names and other identifying information were not collected, and they were given a unique identifier to keep their responses confidential.

Initially, 802 high school students, 170 university students and 182 employees registered to participate in the study. However, 132 participants were removed from the study because they did not participate in all data collection phases. In the end, 1,022 participants fully participated in this study. Of these, there were 707 high school students, 150 university students and 165 employees. Table 1 provides more information about the participants' age and gender.

### Measures

*Soft skills.* This study measured soft skills using the 20-item soft skills assessment of graduates (Succi and Wieandt, 2019). The scale was adapted to fit the Indonesian language and culture. There were three dimensions of the scale: personal, social and methodological. The scale was administered using a seven-point Likert-type scale with options ranging from 1 (strongly disagree) to 7 (strongly agree). This study examined the construct validity of the scale using the confirmatory factor analysis (CFA) technique. The results suggested that the three-factor solution ( $\text{cmin}/\text{df} = 2.74$ ,  $p < 0.001$ , root mean squared error of approximation (RMSEA) = 0.07, Tucker–Lewis Index (TLI) = 0.91) had a better fit than the one-factor ( $\text{cmin}/\text{df} = 19.42$ ,  $p < 0.001$ , RMSEA = 0.09, TLI = 0.83) and two-factor models ( $\text{cmin}/\text{df} = 3.15$ ,  $p < 0.001$ , RMSEA = 0.09, TLI = 0.87). The results confirmed the construct proposed by Succi and Wieandt (2019) with the following factor names; personal, social and methodological. The

Participant	N	Range	Age		Gender	
			Mean (SD)		Male	Female
High school students	707	14–18	16.21 (1.33)		190	517
University students	150	19–22	19.27 (0.95)		28	122
Employees	165	24–40	41.93 (9.59)		86	79

**Table 1.**  
Participants' age and gender



scale's Cronbach's alpha coefficient was also high (0.94), indicating high reliability. *Memotivasi dan memandu orang lain agar berkontribusi efektif* (motivate and guide others to get them to contribute effectively) was one of the items on the scale. Some items were reworded to fit the academic and workplace contexts, such as using the word "friend" for school and university students and "co-worker" for employees.

*Psychological capital questionnaire.* The Psychological Capital Questionnaire (PCQ) was originally developed by Luthans *et al.* (2007a, b, c) to measure the four dimensions (i.e. hope, resilience, optimism and self-efficacy) of PsyCap in organizational settings (Newman *et al.*, 2014). The scale has 24 items, and each dimension has six items (Luthans *et al.*, 2007a, b, c). As before, the items were adapted from English to Indonesian with the translate-back-translate procedure (Brislin, 1970). Also, the wording of some items was changed to fit the academic and workplace contexts. For example, "I always look on the bright side of things regarding my job" was implemented for employees, while "I always look on the bright side of things regarding my study" was used for students. The questionnaire was administered using a six-point Likert-type scale (ranging from 1 = strongly disagree to 6 = strongly agree). Construct analysis using the CFA technique showed that PCQ fit the original four-factor solution (cmin/df = 2.3,  $p < 0.001$ , RMSEA = 0.07) better than the one-factor (cmin/df = 13,  $p < 0.001$ , RMSEA = 0.11) and three-factor solutions (cmin/df = 2.92,  $p < 0.001$ , RMSEA = 0.08). The results confirmed the following factor names: hope, resilience, optimism and self-efficacy. Further, the questionnaire had a Cronbach's alpha coefficient of 0.88, indicating its reliability.

### *Career engagement*

Career engagement was measured using the nine-item career engagement scale (CES). This scale was originally developed by Hirschi *et al.* (2014) to measure individual engagement in career advancement activities. This scale went through a language adaptation process similar to the previous scales, and the construct validity was examined. The results suggested that the scale employed a three-factor solution (cmin/df = 2.4,  $p < 0.001$ , RMSEA = 0.07, standard root mean square residual (SRMR) = 0.05, goodness of fit index (GFI) = 0.97, comparative fit index (CFI) = 0.97). The factors were named (1) career planning, (2) career exploration and (3) career self-development. The three-factor solution was better than the one-factor solution (cmin/df = 13,  $p < 0.001$ , RMSEA = 0.14, SRMR = 0.05, CFI = 91, GFI = 91). The scale was considered highly reliable, with a Cronbach's alpha coefficient of 0.90. *Saya peduli terhadap perkembangan karir saya* (I care about my career development) was one of the items on the scale.

### *Demographic variables*

This study also collected participants' age and gender. Participants were asked to report their current age ("What is your age?") and gender ("What best describes your gender, male or female?").

### *Procedure*

This study was a part of a career engagement program held by the Universitas Negeri Makassar. The program involved an investigation about students' (in high schools and universities) and employees' career aspirations and advancement. To advertise the study, all authors sent online invitations to five high schools and three universities in South Sulawesi. These schools and universities were selected because they represented the most popular and largest education institutions in South Sulawesi. For the employee participants, the second author solicited participation through some universities' alumni networks and groups. All university students and employees completed a registration process, read and approved the

study's consent form and agreed to participate in all data collection phases. High school students were required to submit their parent's or guardian's email addresses for participating in this study. The consent form and parent's approval were administered with an opt-out method in which the parents only replied to the email if they decline participation in the study. Nevertheless, all participants could withdraw their participation at any point in the study without further notice or reasons. Participants who were deemed eligible to participate received a link to complete the survey.

The survey was administered in three phases to reduce the common method bias (MacKenzie and Podsakoff, 2012). In the first phase, the study collected data on the age, gender and soft skills of participants. In the second phase, participants were asked to complete the PCQ. At the final phase, all participants completed CES. The interval between the phases was two weeks, and participants could only participate in the next phase upon completing the previous phase.

Consequently, there were some attritions during the data collection process. In the first phase, 50 participants failed to complete the online survey, and 62 in the following phase. In the end, 20 more participants were excluded because they did not complete the third phase, making a total of 132 exclusions.

## 10 results

### Measurement model analysis

The study's measurement model was tested using the CFA technique. The hypothetical measurement model was compared with two other alternative models (one-factor and two-factor models). Table 2 shows the fit indices for the three models. The hypothetical measurement model ( $cmin/df = 4$ ,  $RMSEA = 0.06$ ,  $SRMR = 0.07$  and  $CFI = 0.90$ ) had a better fit than the other two alternative models. Also, the average variance extracted (AVE) was above 0.52 for all measures, indicating an acceptable convergent validity.

### 6 Hypothesis testing

Table 3 shows the mean, standard deviation (SD) and correlations between variables:

As seen in Table 3, age was positively associated with all variables, with correlation coefficients ranging from 0.13 (age and CES) to 0.23 (gender and PsyCap). Gender was found to positively correlate with age (0.21) and PsyCap (0.07). These positive correlations indicated that male participants were older than their female counterparts and had higher PsyCap scores. Soft skills, PsyCap and CES were associated with considerably high positive correlations, ranging from 0.55 to 0.73.

The next part of the analysis was to test the hypotheses. This study employed a moderated-mediation regression technique by Hayes (2013). Age was grouped into three different sections: 1) high school students (14–18 years of age), 2) university students (19–22 years of age) and employees (23–60 years of age). This grouping technique mimicked

Model	cmin/df	RMSEA	SRMR	CFI
Hypothetical <sup>a</sup>	4	0.06	0.07	0.90
One-factor <sup>b</sup>	6	0.07	0.09	0.71
Two-factor <sup>c</sup>	7	0.10	0.12	0.62

**Note(s):** <sup>a</sup>Soft skills, PsyCap and career engagement

<sup>b</sup>Soft skills, PsyCap and career engagement in one factor

<sup>c</sup>Soft skills and PsyCap were combined, and career engagement

**Table 2.**  
Measurement model analysis

ET

the actual age groups in the Indonesian population. To avoid multicollinearity, the soft skills variable was mean-centred. This procedure was performed using the PROCESS macro by Hayes (2013) with conditional process model 7. Table 4 shows the moderated-mediation computation results.

The effect of soft skills on PsyCap was positive and significant (0.66,  $p < 0.001$ ), which provided support for hypothesis 1. Soft skills also directly impacted career engagement (0.09,  $p < 0.001$ ). As shown in model 2, PsyCap positively impacted career engagement (0.24,  $p < 0.001$ ). Since soft skills influenced PsyCap and PsyCap impacted career engagement, the mediating effect of PsyCap was supported (hypothesis 2). However, the mediation was considered partial because soft skills also directly influenced career engagement.

The analysis also found that the impact of soft skills on PsyCap depended on the participants' age group. The interaction between soft skills and the age group negatively

**Table 3.** Mean, standard deviation and bivariate correlation

Variable	Mean (SD)	1	2	3	4
1. Age	20.81 (10.16)	–			
2. Gender	0.30 (0.46)	0.21**	–		
3. Soft skill	114.01 (15.22)	0.20**	0.04	–	
4. PsyCap	111.18 (14.18)	0.23**	0.07*	0.73**	–
5. CES	35.26 (6.97)	0.13**	0.03	0.55**	0.63**

**Note(s):** PsyCap = Psychology capital, CES = Career engagement scale, gender (1 = male, 0 = female)  $N = 1,022$ , \* $p < 0.05$ , \*\* $p < 0.01$

**Table 4.** Moderated-mediation model 7 using PROCESS by Hayes (2013)

Model 1	Coefficient	SE	LLCI	ULCI	R	R <sup>2</sup>
<i>Outcome: Psychological capital</i>						
SS	0.66***	0.02	0.62	0.70	0.74	0.55***
Age group	0.16***	0.04	0.10	0.23		
SS*Age group	-0.01*	0.00	-0.01	0.00		
Model 2	Coefficient	SE	LLCI	ULCI	R	R <sup>2</sup>
<i>Outcome: career engagement</i>						
SS	0.09***	0.02	0.06	0.12	0.64	0.41***
PsyCap	0.24***	0.02	0.20	0.27		

**Note(s):** SS = Soft skill, CES = Career engagement scale, PsyCap = Psychological capital, SE = Standard error, LLCI = Lower-level confidence interval, ULCI = Upper-level confidence interval  $N = 1,022$ , \* $p < 0.05$ , \*\*\* $p < 0.001$

**Table 5.** Conditional indirect effects of soft skill at different ages

Age	Effect	SE	LLCI	ULCI
14–18 (high school students)	0.16***	0.01	0.14	0.19
19–22 (college students)	0.16***	0.01	0.13	0.18
23–60 (employees)	0.14***	0.01	0.12	0.17

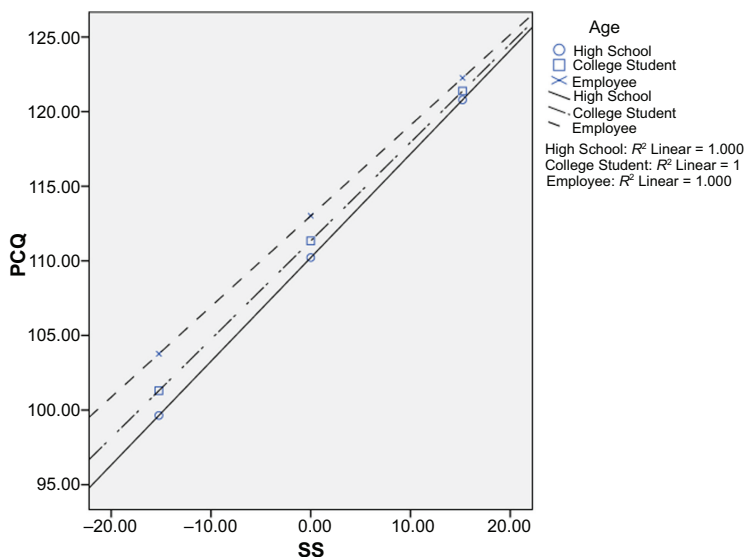
**Note(s):** SE = Standard error, LLCI = Lower-level confidence interval, ULCI = Upper-level confidence interval  $N = 1,022$ , \*\*\* $p < 0.001$

predicted PsyCap. These results supported hypothesis 3. Table 5 provides details on the conditional indirect effect of soft skills on career engagement via PsyCap. The results indicated that soft skills positively influenced career engagement through PsyCap in all age groups. However, the indirect effect was stronger for high school and university students (0.16,  $p < 0.001$ ) than for employees (0.14,  $p < 0.001$ ). This concludes that the moderated-mediation model was confirmed, lending support to the last hypothesis (hypothesis 4).

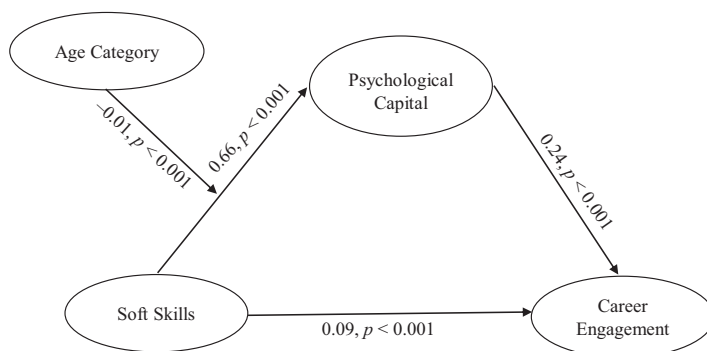
Figure 1 depicts the conditional effect of soft skills on PsyCap at different age groups, and Figure 2 illustrates this study's moderated-mediation empirical model.

### Discussion

This study found that age groups moderated the indirect effect of soft skills on career engagement via PsyCap. The empirical findings also suggested that students from high



**Figure 1.**  
The moderating effect of age on the SS- PsyCap relationship



**Figure 2.**  
The moderated-mediation model

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schools and universities experienced a greater impact of soft skills on PsyCap and consequently improved career engagement. However, the effect persisted across different age groups (i.e. school students, university students and employees at workplaces). This study confirmed the application of SCT and the JD-R model across different developmental stages.

Mastering soft skills provides an experience of skill mastery, which consequently boosts one's self-efficacy. The performance and experience of mastery become the sources of self-efficacy (Bandura, 1988). Students and workers viewed soft skills as their capability to perform tasks (Kantrowitz, 2005; Cimatti, 2016; Kyllonen, 2013; Gibb, 2014). Their perception of soft skill mastery became the source of efficacy and other positive psychological states. Self-efficacy was one of the most influential PsyCap dimensions, and the increase of one of the positive psychological states possibly influenced the core PsyCap dimensions (Luthans *et al.*, 2007a, b, c). PsyCap dimensions appeared to be synergetic in the sense that the positive mental state may not only leverage one dimension, but the whole PsyCap construct. Thus, soft skills and perceived capability might lead to an increase in PsyCap. In this mechanism, perceived skill mastery would bring hope, optimism, resilience and efficacy to people regardless of their career developmental stage (e.g. students or workers).

The next part of the findings concerned the indirect effect of soft skills on career engagement through the role of PsyCap. PsyCap has been known for its tremendous impact on employees' work engagement and performance (Daraba *et al.*, 2021; Joo *et al.*, 2016; Saleh *et al.*, 2020; Tamar *et al.*, 2020; Wirawan *et al.*, 2020). This study confirmed that PsyCap provided resources for students' and employees' career engagement. According to the JD-R model, people engage if they perceive there are abundant resources to deal with demanding tasks (Bakker, 2011). PsyCap is a form of an individual's psychological resources (Bakker and Demerouti, 2007, 2008; Schaufeli and Bakker, 2004). These psychological resources give individuals enough energy to engage in career-advancement activities, such as information-seeking and professional-skill improvement (Hirschi, 2011; Hirschi *et al.*, 2014; Hirschi and Freund, 2014).

The application of the JD-R model can explain the effect of PsyCap on career engagement. Psychological resources potentially provide some advantages to people across developmental stages. Although the JD-R model has been widely used to explain the positive effect of PsyCap on work engagement, this study advanced the application of the JD-R model beyond the workplace context. Career engagement may have a similar mechanism with work engagement. Thus, the JD-R model can be used to explain both mechanisms. All these findings confirmed the applicability of SCT and the JD-R model. Both theories explain how soft skills influence an individual's career engagement through the role of PsyCap.

This study has emphasized the role of PsyCap in mediating the effect of soft skills on career engagement. The results showed that soft skills could directly impact career engagement. However, the impact was considerably weaker than the impact of PsyCap on career engagement. Soft skills might not be a strong direct predictor for an individual's career engagement. Unless soft skills significantly impact an individual's psychological resources, the effect of soft skills on career engagement could be limited. Possessing a set of soft skills could provide a sense of personal mastery and improve personal resources (e.g. efficacy). In other words, soft skills could have a stronger impact on career engagement if the exertion of soft skills also activates PsyCap. This mechanism involves the role of PsyCap because soft skills must activate positive psychological states and restore personal resources before eventually help people to engage in career-advancement activities. Therefore, PsyCap should be considered one of the most important factors in linking soft skills and career engagement.

Another piece of empirical evidence also supported that individuals' age group determined the indirect effect of soft skills on career engagement. Although all participants experienced the effect of soft skills on PsyCap, the magnitude of this effect

depended on the career development stage. Students, regardless of their level, consistently perceived soft skills as the source of PsyCap. This perception was stronger for students because teachers (or professors in university) encourage the acquisition of soft skills by facilitating a sense of efficacy (Schunk, 1984). The flaw in the acquisition of soft skills is that this does not immediately influence academic achievement. Soft skills do not receive a formative or summative evaluation, such as other subjects in the classroom. In this case, students might experience minor failure and negative feedback. Success in the acquisition and application of soft skills fosters a sense of mastery (Bandura, 1988, 1989, 2012) and eventually becomes the source of PsyCap. Employees could also experience the same mechanism; however, their situation was slightly different from the students. Their soft skills influence performance, and the flaw in the application of soft skills can be detrimental to performance. The negative feedback from superiors or co-workers might also exacerbate this condition. This is the reason soft skills mastery had a weaker effect on employees' PsyCap.

Soft skills showed a considerably strong impact on an individual's PsyCap. As soft skills develop, the sense of mastery enriches an individual's positive psychological states. Regardless of the level of career development, soft skills could influence the development individual's PsyCap. Possessing a high level of soft skills could benefit people in developing a positive mental state. In some instances, soft skills allow individuals to implement an effective strategy and ensure goals (Succi and Wieandt, 2019). These individuals frequently witness the impact of their soft skills on their achievements at schools or workplaces. People could have learned from their day-to-day experience and know that their soft skills would lead to successful accomplishment (Bandura, 2012). The effect of soft skills on PsyCap becomes stronger as the successful accomplishment accumulates as the results of soft skills implementation.

This study found that soft skills effects on PsyCap changed over the individual's career development stages. Students from high schools and universities appeared to show a similar impact of soft skills on PsyCap. Soft skills can develop throughout an individual's lifespan and positively impact various achievements. However, the mechanism in which soft skills impact PsyCap might change as the students entered workplaces. The effect of soft skills on PsyCap among employees was slightly lower than those in schools and universities. The direct impact of soft skills mastery on PsyCap in the workplace context could have been more complex than in education institutions. For example, some conflicts might emerge in managing employees' talent (Thunnissen, 2016). Of course, soft skills are still essential for employees' success. However, a combination of contextual factors within workplaces (Oc, 2018) can reduce the direct effect of employees' soft skills on their PsyCap development. Thus, soft skills acquisitions in the workplace setting might not directly warrant a sense of mastery and achievement.

This study supported that soft skills and PsyCap predict career engagement regardless of individuals' age group. Human development stages require certain task completions, and mastering soft skills might be a sign of the completion of the stages. Individuals who know that they have the required skills to perform will be more likely to engage with and struggle in a challenging situation. Transforming soft skills into psychological resources could be more challenging for employees than students at any grade level. However, it must be noted that soft skills are pivotal for academic achievement, employee performance and career advancement. Perceived soft skill mastery can transform PsyCap into career engagement for high school students, university students and employees in the workplace.

### *Implications*

This study emphasized the critical role of soft skills across different age groups. Therefore, the development of soft skills should be integrated with an individual's self-development.

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This study proposed three significant implications of the findings. First, the education system should direct more attention towards developing students' non-cognitive skills. Fortunately, many teachers and educators have endorsed the role of learning-related behaviours even though they still emphasize the importance of cognitive skills. Teachers must encourage students to engage in various learning-related activities, exercise their skills and experience success and failure in learning new skills. Nonetheless, contextual factors should be considered in developing soft skills. For example, some students can easily access learning resources (e.g. books, Internet), while those in developing countries still struggle to locate a decent classroom.

Second, although the effect of soft skills on career engagement decreased as individuals entered a workplace, the effect of soft skills was still considered significant for the employees' career engagement. People should understand that their career advancement does not stop after finding a work life in a business or public organization, but rather, the advancement continues in the workplace context. In this regard, soft skills play an essential role in encouraging employees to engage in career-advancement activities. Organizations can foster employees' soft skills by providing more opportunities to develop new skills and implementing these skills using a project-based learning approach. Also, a supportive supervisor and the provision of constructive feedback facilitate the effect of soft skills on employees' PsyCap. Supervisors help employees to ensure that their soft skills are fruitful and impact desirable performance. All these will lead to a higher PsyCap and provide resources for employees' career engagement.

Third, PsyCap has a vital role in facilitating the effect of soft skills development on career engagement. Although soft skills have a strong impact on PsyCap, other paths should be considered to develop a student's and employee's PsyCap. For example, in an educational setting, PsyCap could be improved through the teacher's supportive feedback. In workplaces, all forms of organizational support could help to improve the employee's PsyCap. As people move from one context to another, they will also experience a different source of support. PsyCap can be developed via a systematic learning approach at schools and workplaces, such as training to improve self-efficacy or coaching to improve optimism and resilience.

#### *Limitation and future research directions*

This study was conducted using a cross-sectional data collection technique. Data were collected from three different age groups (i.e. high school students, university students and employees). Although a three-wave data collection method can reduce the common method biases, this study did not completely reveal how soft skills continuously affect individuals from high schools to workplaces. To advance the existing knowledge, a longitudinal study should be employed in which the same individuals are observed from high schools to their employment in the workplace. This method will also allow researchers to monitor individuals' development of career engagement, PsyCap and soft skills throughout the career developmental stages. Another limitation of this study was that the number of participants was significantly imbalanced. Although the number was enough to reduce type II errors, the generalizability could be improved by including more participants from different participant sources. Therefore, future studies should replicate this study with more data from university students and employees in workplaces.

Lastly, this study could be improved by considering the effect of contextual factors and other types of resources. As proposed by the JD-R theory, there are two types of resources (i.e. job and personal). Job resources are relevant for employees in workplaces, while learning resources are necessary to support students. Also, following the notion of graduate capital (Tomlinson, 2017), other factors such as human, social, cultural and identity capital could impact an individual's career management. Therefore, future studies should consider various

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types of resources and investigate how different types of resources interact and influence career engagement across different age groups. Additionally, this study should be replicated across different cultures, and the role of cultural dimensions (e.g. masculinity, collectivism) should be examined.

The effects of  
soft skills

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## Conclusion

This study found that a set of soft skills is essential for both students and employees. Although people develop and move from one developmental stage to another, their soft skills still significantly impact PsyCap and career engagement. SCT and the JD-R model can be employed to explain how soft skills leverage individuals' PsyCap and foster career engagement. SCT and the JD-R model have been widely used in organizational contexts, and this study examined how these theories could be applied across different contexts. The perception of soft skill mastery can become the source of self-efficacy. The increase of self-efficacy will influence the core PsyCap dimensions, which consequently provides resources to career engagement. This indirect effect was observed across different age groups. High school and university students showed a stronger effect of perceived soft skills on PsyCap and career engagement, while this effect was weaker for employees in various workplaces. Education institutions and organizations should help people advance their careers by facilitating an environment that supports soft skills and positive psychological states.

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