




The Mediator Role of Social-emotional Learning Skills in the Relationship between Depression and Mental Well-being

Depresyon ve Mental İyi Oluş Arasındaki İlişkide Sosyal-Duygusal Öğrenme Becerilerinin Aracı Rolü

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Abstract. The well-being is a fairly comprehensive and multifaceted construct and covers a broad spectrum of dimensions, including mental well-being, which has been an appealing area of study for scholars from different parts of the world. The current study aims to explore the relationship among depression, social-emotional learning skills, and mental well-being in a conveniently selected sample of college students. The sample consisted of 237 public school undergraduate students, of whom 151 (63.29%) were women. The results indicated that the indirect effect of depression on mental well-being through social-emotional learning skills was significant, implying a partial mediation effect. The findings show that social-emotional learning skills pose a protective factor against lower levels of mental well-being occurring as the result of depressive symptoms. The overall model explained 32% of the variance in mental well-being. Findings were discussed in the light of the relevant literature. Through synthesizing current literature knowledge and results derived, this study aims to provide a foundation for further research and practice that promotes mental well-being.

Keywords: Mental well-being, social-emotional learning skills, depression, college, mediation.

Öz. İyi oluş, mental iyi oluş halini de kapsayan geniş boyutlu ve çok yönlü bir kavram olarak dünyanın farklı bölgelerindeki çalışmacılar için ilgi çeken bir çalışma alanı olmuştur. Bu çalışma, uygun örnekleme yöntemiyle ulaşılmış bir grup üniversite öğrencisi üzerinde depresyon, sosyal-duygusal öğrenme becerileri ve mental iyi oluş arasındaki incelemeyi amaçlamaktadır. Çalışmanın örneklemini 151'i (%63.29) kadın olmak üzere devlet okulunda öğrenim gören 237 lisans öğrencisi oluşturmaktadır. Sonuçlar, sosyal-duygusal öğrenme becerilerinin depresyon ve mental iyi oluş arasındaki ilişkide kısmi aracılık rolünün olduğunu göstermiştir. Bulgular, sosyal-duygusal öğrenme becerilerinin depresyon semptomlarına bağlı olarak ortaya çıkan düşük mental iyi oluşta koruyucu bir faktör olduğuna işaret etmektedir. Hipotez edilen model, mental iyi oluştaki varyansın %32'sini açıklamıştır. Bulgular ilgili literatür göz önünde bulundurularak tartışılmıştır. Bu çalışma, literatürde var olan bilgileri mevcut çalışma sonuçlarıyla sentezleyerek mental iyi oluş alanındaki araştırma ve uygulamalara temel oluşturmayı ve bu alandaki çalışmalarını daha ileriye taşımayı amaçlamaktadır.

Anahtar Kelimeler: Mental iyi oluş, sosyal-duygusal öğrenme becerileri, depresyon, üniversite, aracılık.



Genişletilmiş Özet

Giriş. Pozitif ruh sağlığı ve mental iyi oluş ile ilgili gerçekleştirilen bilimsel çalışmalar son yıllarda artış göstermekte (Rusk & Water, 2013) ve bu kavramlar birer halk sağlığı sorunu olarak betimlenmektedir (Cosma vd., 2020). İyi oluş, fiziksel, duygusal, mental, entelektüel ve ruhsal iyi oluş gibi kavramları içeren geniş kapsamlı bir terimdir (Harrington, 2012). Mental iyi oluş zihinsel sağlığının pozitif yönünü ifade eden bir kavram (Söner ve Eldeleklioğlu, 2022); bireylerin kendilerini genel olarak iyi hissetmeleri, yaşamdan memnun olmaları ve kendilerini gerçekleştirebilmeleri durum (Söner vd., 2024) ve subjektif ve değişkenlik gösteren bir durum olarak kaliteli ve sağlıklı bir yaşamın temel taşlarından biri olarak görülmektedir (Fredrica vd., 2013). Yapılan çalışmalar yüksek düzeyde mental iyi oluşa sahip bireylerin mutluluk, yaşam doyumu, baş etme becerileri ve psikolojik işlevsellik düzeylerinin de daha yüksek olduğuna işaret etmektedir (Ryan & Deci, 2001). Dolayısıyla, mental iyi oluşun genel psikolojik sağlığın önemli bir bileşeni olduğu söylenebilir.

Mental iyi oluş her gelişim dönemi için önemli bir kavram olsa da özellikle 'geçiş' niteliği taşıyan bazı gelişim dönemlerinde daha önemli hale gelmektedir. Bu 'geçiş' niteliği taşıyan dönemlerden biri de üniversite yıllarını da kapsayan genç yetişkinlik dönemidir. Bu dönemde öğrenciler bağımsız seçimler yapma, karar verme, sorumluluk alma, akademik hayatın gereksinimlerine uyum sağlama, farklı birey ve gruplarla etkileşim içerisinde olma gibi yeni zorluklarla karşılaşır (Mey & Yin, 2005). Benzer şekilde, depresyon ve kaygı gibi birçok ruh sağlığı sorununun başlangıcı da çoğunlukla üniversite yıllarına dayanmaktadır (Li & Lin, 2003; Pedrelli vd., 2005) ve üniversite öğrencileri arasındaki ruh sağlığı sorunlarının artışı bazı endişeleri de beraberinde getirmektedir (Knapstad, 2021). Bu durum, 'yüksek öğretimde ruh sağlığı krizi' olarak tanımlanmaktadır (Evans vd., 2018).

Depresyon-major depresyon, uyku ve beslenme sorunları, duygu durumundaki çökkünlük, yoğun suçluluk, utanç ve değersizlik duygularıyla karakterize bir durumdur. Depresyonun bireylerin hayat kalitelerini düşürücü ve yaşamlarını zorlaştırıcı etkilerinin yanı sıra, intihar davranışlarına yol açan en belirgin (Bradvik, 2018; Bachmann, 2018) ve tüm gelişim dönemleri için en sık karşılaşılan/tanı konulan (Finnegan & Randles, 2023; Nachaiwong, vd., 2021) psikiyatrik durum olduğu belirtilmektedir (Bradvik, 2018). Mental iyi oluş, depresyon da dahil olmak üzere tüm ruh sağlığı sorunlarına karşı koruyucu bir role sahiptir (Liu et al., 2022). Yaklaşık 80 çalışmayı içeren bir meta-analizde, mental iyi oluş belirtilerinin herhangi bir ruh sağlığı sorunu olmaksızın koruyucu bir rol üstlendiği bulgusuna rastlanmıştır (Iasiello vd., 2020). Dolayısıyla, mental iyi oluş ve depresyon arasındaki ilişkinin aydınlatılması hem klinik hem de klinik olmayan popülasyon için önem taşımaktadır.

Sosyal duygusal öğrenme (SDÖ) becerileri, sağlıklı benlik gelişimi, duyguları tanıma ve yönetme, kişisel ve toplumsal hedeflere ulaşma, empati duyma ve bunu ifade etme, olumlu ilişkiler geliştirme ve sürdürme ve sorumlu ve yapıcı kararlar alma adına gerekli bilgi, beceri ve tutumlar olarak tanımlanabilir (CASEL, 2020). SDÖ bilişsel, duygusal ve davranışsal becerileri içeren beş boyut altında toplanabilir (CASEL, 2015). "Öz-farkındalık", kişinin güçlü yönlerini ve sınırlılıklarını doğru bir şekilde değerlendirmesini ve sağlam temellere dayanan bir özgüven ve iyimserlik duygusuna sahip olmasını içerir (Denham & Brown, 2010). "Öz-yönetim", kişinin farklı durumlarda duygu, düşünce ve davranışlarını kontrol edebilme becerisini ifade eder. "Sosyal farkındalık" başkalarının bakış açılarını anlama ve empati kurma, benzerlik ve farklılıkları hoş karşılamayı kapsar (Denham & Brown, 2010). "Sorumlu karar verme", etik davranış, sosyal normlar, kendisi ve diğerleri çerçevesinde kişisel davranış ve sosyal etkileşimlerle ilgili yapıcı ve saygılı kararlar verme ve çeşitli eylemlerin sonuçlarını gerçekçi bir şekilde değerlendirme becerisidir (CASEL, 2015; Denham ve Brown, 2010). "İlişki becerileri" ise, farklı



bireyler ve gruplarla anlamlı ilişkiler kurma ve sürdürme becerisini ifade eder (Kress ve Elias, 2006). SDÖ becerilerinin ruh sağlığı (Ladd vd., 1999; Zins vd., 1997) ve iyi oluş (Guerra & Bredshaw, 2008) ile pozitif ilişkisi bulunduğu literatür bulguları mevcuttur.

Yöntem. Bu araştırma, nicel araştırma deseni kullanılarak gerçekleştirilmiştir. Çalışmanın katılımcılarını uygun örnekleme yoluyla seçilen 151'i kadın (%63.29) toplam 237 lisans öğrencisi oluşturmaktadır. Veri, 2024 yılının Mayıs ve Haziran aylarında çevrimiçi olarak toplanmıştır. Katılımcılar, demografik bilgi formu, Depresyon, Anksiyete ve Stres Ölçeği, Sosyal Duygusal Öğrenme Ölçeği-Genç Yetişkin Formu ve Warwick-Edinburgh Mental İyi Oluş Ölçeği'nden oluşan anket paketini doldurmuşlardır. Verilerin analizinde SPSS 25.0 (IBM Corp.,2017) ve JASP (JASP Team, 2023) programları kullanılmıştır.

Bulgular. Çalışma değişkenleri arası ikili korelasyonlar incelendiğinde depresyon ile mental iyi oluş ($r = -.40, p < .01$) ve sosyal duygusal öğrenme becerileri (SDÖ) ($r = -.46, p < .01$) arasında negatif ve anlamlı, mental iyi oluş ve SDÖ ($r = .54, p < .01$) arasında ise pozitif ve anlamlı korelasyonlar elde edilmiştir. Aracılık analizi sonuçları ise depresyon ile mental iyi oluş ($\beta = .10, SE = .02, p < .01$), depresyon ile SDÖ ($\beta = -.12, SE = .02, p < .01$), ve SDÖ ve mental iyi oluş ($\beta = .45, SE = .06, p < .01$) arasındaki doğrudan etkilerin anlamlı olduğunu göstermiştir. Son olarak, SDÖ'nün depresyondan mental iyi oluşa giden doğrudan etkide kısmi aracılık rolü üstlendiği ($\beta = -.05, SE = .02, p < .01$) bulgusuna ulaşılmıştır. Tüm model, mental iyi oluştaki varyansın %32'sini açıklamıştır.

Sonuç Tartışma ve Öneriler. Bu çalışmanın amacı depresyonun ile mental iyi oluş arasındaki ilişkide SDÖ'nün aracı rolünü incelemektir. Sonuçlar, SDÖ'nün depresyon ve mental iyi oluş arasında kısmi aracılık rolü üstlendiğini işaret etmektedir. Bu bağlamda, depresif semptomların düşük mental iyi oluşla ilişkili olduğu, SDÖ'nün ise bu ilişkide koruyucu bir rolü olduğu sonucuna ulaşılabilir. Depresyonun mental iyi oluşla negatif ilişkisinin olduğu (Grant vd., 2013; Dyrbye vd., 2012, Li vd., 2024), SDÖ'nün ise hem mental iyi oluşla pozitif ilişkisinin olduğu (Kasikci & Öğülmüş, 2023) hem de depresyona karşı koruyucu bir etkisinin olduğu (Zins et al., 2007; Horowitz & Garber, 2006; Kautz vd., 2014; Kalra vd., 2018) literatür tarafından da desteklenen bir bulgudur. Çalışmanın sonuçları SDÖ becerilerinin önemine işaret etmekte olup bu becerileri arttırmaya yönelik programlar düzenlenmesi üniversite öğrencilerinin mental iyi oluşunu arttırmada önemli rol oynayabilir. SDÖ becerilerinin artırıldığı ortamlarda kişiler kendi duygularının ve ihtiyaçlarının daha fazla farkında olacağı ön görüldüğünde ise depresyon gibi ruh sağlığı problemlerine daha proaktif bir şekilde müdahale edilip ruh sağlığına ilişkin damgalama azaltılabilir ve erken müdahale teşvik edilebilir. Bu çalışmanın sınırlılıklarından biri seçkisiz örnekleme yöntemi kullanılması sebebiyle ortaya çıkan genellenebilirliğe yönelik kısıtlamadır. Bir diğer sınırlılık ise, korelasyonel metot kullanılmasından ötürü çalışma değişkenleri arasında neden-sonuç ilişkilerinin kurulamaması olarak belirtilebilir. Gelecek çalışmalar, beş boyuttan oluşan SDÖ becerilerinin farklı boyutlarının depresyon ve mental iyi oluş arasında ne şekilde koruyucu etkiye sahip olduğunu açıklamayı amaçlayabilir.



Introduction

Research into 'positive' mental health states or mental well-being has shown an increasing trend (Rusk & Waters, 2013) and has been identified as a public health issue (Cosma et al., 2020). Well-being is an umbrella term that encompasses such aspects as physical, emotional, mental, intellectual, and spiritual well-being (Harrington, 2012). As defined by the World Health Organization [WHO] (2004), mental well-being refers to an individual's recognition of their own potential, efforts to deal with challenging experiences, capacity to be productive in both personal and social life, and efforts to contribute to society within the scope of their abilities. The scope of this definition was thought to lead to a significant advancement in both research and practice as it broadens the concept of mental health beyond and above the absence of mental illness and includes the presence of positive attributes (Galderisi et al., 2015). It was also demonstrated that mental well-being and mental disorders are closely related but independent constructs and that mental well-being can still be of significance even if the individual suffers from a mental health disorder (Weich et al., 2011).

It is widely accepted that mental well-being is a multifaceted, subjective, and dynamic state and is a prominent element of healthy and quality living (Fredrica et al., 2013). Several experimental and cross-sectional studies showed that high levels of mental well-being are associated with better health, development, and longer life span (Diener et al., 2017; Friedman & Kern, 2014). In another study, mental well-being is positively linked with increased levels of both physical and mental health and characterized by several aspects such as satisfying relationships, purpose in life, contentment and resilience (WHO, 2023). Mental well-being is argued to be one ingredient of positive mental health characterized by happiness, life satisfaction, coping and psychological functioning (Ryan & Deci, 2001). Therefore, it appears that mental well-being is a crucial component of psychological health, and exploring its precursors bears particular importance as it is an integral part of overall health.

Although state of mental well-being is important for every developmental period, it becomes particularly important during transition periods such as young adulthood, corresponding to college years in several contexts. In this period, students encounter new challenges, including making independent choices about their lives, adapting to the requirements of academic proficiency, and engaging with diverse groups of individuals. What is more, these challenges tend to reach their peak at the beginning of college life and gradually decrease over time (Mey & Yin, 2015). One reason behind it could be that as university life introduces new stressors that can exacerbate underlying vulnerabilities and as students make a transition from a familiar environment to a more demanding setting in terms of both academic and interpersonal skills, they might feel overwhelmed and become vulnerable to experience challenges in different life domains. Therefore, several mental health disorders, such as depression and anxiety, mainly start off during college years (Li & Lin, 2003; Pedrelli et al., 2015), and it was reported that there is an increase in prevalence and severity of mental health issues among college youth (Knapstad, 2021).

Interest in the mental health and well-being of university students has surged dramatically in recent decades. One reason behind that is related to the prevalence and severity of mental health issues and increases in help-seeking behavior among university students worldwide (Lipson et al., 2019), which was also referred to as 'the mental health crisis in higher education' (Evans et al., 2018).

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Additionally, as psychological distress experienced in early adulthood is associated with decreases in attendance, academic performance, and engagement (Antaramian, 2015), the studies covering the mental well-being of university students might have been subject to a gradual increase. Therefore, investigating their mental health helps identify the specific challenges they face, such as anxiety, depression, and stress, which can affect their academic performance and overall quality of life along with wide range of societal and practical implications. Therefore, exploring students' mental well-being during college years is particularly important because this period is often characterized by significant transitions and peculiar challenges.

Depression, or major depression, is characterized by symptoms including problems in sleep and eating, low mood, and intense feelings of guilt and worthlessness. Depression is a major public health concern and is regarded as one source of disability across the globe (Vos et al., 2019). Along with their debilitating effects on individuals, mental health disorders and mood disorders (e.g., depression) could give rise to disabilities and as well as fatal outcomes such as suicide (Bradvik, 2018). Depression, in particular, was alleged to be the most prevalent mental health condition across divergent developmental stages (Finnegan & Randles, 2023; Nachaiwong et al., 2021). According to a report by the World Health Organization [WHO] (2017), major depressive disorder accounts for the greatest burden among entire mental and behavioral disorders. Depression has been found to be associated with impairment in work and career (Kokko et al., 2006; Lerner et al., 2010) as well as mindfulness (Söner & Kartol, 2022) and even suicide (Bachmann, 2018).

It was argued that despite the research on depression predominantly focused on negative risk factors so far, positive psychological factors might play a protective factor in depression (Duckworth et al., 2002). Mental well-being is a cornerstone concept within the context of mental health problems. Existing studies pointed out the protective role of mental well-being in different mental health issues. For instance, it was shown that stressful life events lead to a decrease in subjective well-being, which, in return, results in higher rates of mental health problems, including suicidal behaviors, among a sample of college students (Liu et al., 2022). Furthermore, increased levels of mental well-being during a 10-year period are related to a reduction in developing mental illness by as much as 8.2 times among individuals without a mental health concern (Wood & Joseph, 2010), and it also enhances the likelihood of recovery in those with a mental health concern (Schotanus-Dijkstra et al., 2019). Therefore, it appears that exploring the relationship between mental well-being and mental health issues is of paramount importance for both clinical and non-clinical populations. This is similar to the result derived from a meta-analysis conducted over 80 studies indicating that indicators of mental well-being have a protective effect irrespective of a particular mental illness (Iasiello et al., 2020).

According to the CASEL (2020), social-emotional learning skills (SEL) refer to knowledge, skills, and attitudes required for fostering positive self-concepts, understanding and regulating emotions, achieving individual and shared objectives, showing and feeling empathy for others, building and sustaining nurturing relationships with others and making thoughtful and caring decisions. Additionally, SEL involves enhancing competencies regarding identifying and managing emotions, aiming for and accomplishing positive goals, appreciating others' perspectives, creating and maintaining positive connections with others, making sound decisions, and resolving conflicts in a positive manner (Elias et al., 1997).



Five basic areas of competence have been defined by CASEL (2015), namely cognitive, emotional, and behavioral competencies. *Self-awareness* entails a precise assessment of one's abilities and limitations, along with developing self-confidence and optimism rooted in reality. *Self-management* refers to the ability to control one's emotions, thoughts, and behaviors under different situations (CASEL, 2015). *Social awareness* refers to understanding and empathizing with divergent points of view and appreciating commonalities and disparities (Denham & Brown, 2010). *Responsible decision-making* involves skills regarding making thoughtful and respectful decisions concerning personal behaviors and social engagement via considering the moral rules, social norms, self-awareness, and consideration for others, and evaluating the outcomes in a realistic manner (CASEL, 2015; Denham & Brown, 2010). Lastly, *relationship skills* refer to the ability to develop and preserve nurturing connections with others (Kress & Elias, 2006).

SEL skills involve effectively managing relatively complicated situations regarding social interactions, academic achievement, physical and mental health, and relationships with others (Zins & Elias, 2006). The literature on SEL skills demonstrated that it is relevant within the context of youth (Benson et al., 2006). For instance, SEL skills were found to lead to positive outcomes in mental health, well-being, and academic success (Guerra & Bradshaw, 2008; Ladd et al., 1999; Zins & Elias, 2006; Zins et al., 2007). Moreover, SEL skills were associated with a decrease in risk-taking behaviors (Durlak et al., 2011; Reynolds et al., 2011), anxiety (Kautz et al., 2014), symptoms of depression (Horowitz & Garber, 2006), and stress (OECD, 2021) among youth. Along with that, it was pointed out that depression is related to divergent dimensions of SEL skills, including greater difficulties in making decisions (Leykin et al., 2011), decreased level of self-awareness (Yuan et al., 2024), trouble in self-management skills (Van Grieken et al., 2018) and impairments in relationship skills (Teo et al., 2013).

Therefore, SEL skills could play a protective role in the relationship between depression and mental well-being by equipping individuals with the tools to manage emotions, build resilience, and foster positive relationships. SEL focuses on developing self-awareness, self-regulation, social awareness, relationship skills, and responsible decision-making (CASEL, 2015). These competencies might help individuals recognize and manage depressive symptoms, reducing their negative impact on overall mental health. Moreover, SEL skills include self-awareness (Denham & Brown, 2010), which might enable individuals to identify early signs of depression including persistent sadness or withdrawal. By recognizing these feelings, they can seek help or employ adaptive coping strategies before the symptoms worsen. For this reason, strong SEL competencies theoretically make individuals better equipped to navigate the challenges arising from depressive symptoms, which, in return, increase their overall mental well-being. Within the context of this study, the following hypotheses were formed:

Hypothesis 1: Depression is directly and negatively related to mental well-being.

Hypothesis 2: SEL skills are directly and positively related to mental well-being.

Hypothesis 2: Depression is indirectly related to mental well-being through SEL skills.



Method

Participants and procedure

The participants of the study consisted of 237 undergraduate students (n = 151, 63.29% women) enrolled in two public universities in Türkiye. During the data collection process, a convenience sampling method was followed. The ages of the sample were between 20 and 28 ($M=21.8$, $SD=1.08$). The sample comprised 29 sophomores (12.24%), 89 juniors (37.55%), and 119 seniors (50.21%). The participants were enrolled in Guidance and Psychological Counseling (n= 45, 18.98%), Special Education (n= 73, 30.8%), English Language Teaching (n= 32, 13.5), Mathematics Teaching (n= 37, 15.61%) and Turkish Language Teaching (n = 50, 21.11%) programs.

Before initiating the data collection process, ethics committee approval was obtained from the Zonguldak Bülent Ecevit University Human Subjects Ethics Committee (Number: 26.04.2024/422512). Subsequently, an online data collection procedure was followed through Google Forms, with the response time estimated at approximately 15–20 minutes. The data were collected between May and June 2024, and the participants were recruited through online university groups and social media announcements. Informed consent was obtained online from all participants, where they were informed about ethical issues of confidentiality, anonymity, and right to withdraw from the study.

Instruments

Demographic information form

A demographic form developed by the researchers was used to collect information about the participants' demographics, including age, gender, department, and grade.

Depression, Anxiety, Stress Scale - Short form (DASS-21)

The Depression, Anxiety, Stress Scale was developed by Henry and Crawford (2005) to measure the negative emotional states (depression, anxiety, and stress) of individuals. The scale consists of a total of 21 items and 3 sub-dimensions in 4-point Likert type (0-Never, 4-Always). There are 7 items in each sub-dimension of the scale, and the scale has a minimum score of 0 and a maximum score of 63. The construct validity evidence was ensured through Confirmatory Factor Analysis (CFA) and calculating the correlation between DASS and Positive/Negative Affective States Scale (PANAS).

The scale was adapted into Turkish by Yılmaz et al. (2017). In the Turkish version of the scale, a 3-dimensional structure was found in the same way as the original scale ($\chi^2/df = 2.58$, $GFI = .93$, $AGFI = .91$, $RMR = .036$, $RMSEA = .051$). The validity of the DASS-21 was established through the CFA. Cronbach's alpha coefficients calculated for reliability were .81 for the depression subscale, .82 for the stress subscale, and .76 for the anxiety subscale. In this study, only the depression subscale of the DASS-21 scale was used.



Social-emotional Learning Scale - Young adult form (SELS-YF)

Social-emotional Learning Scale - Young Adult Form was developed in Turkish by Karacan-Özdemir and Büyükçolpan (2021) to examine the social-emotional learning skills of undergraduate students. The scale consists of 20 items on a five-point Likert scale (1 - Strongly disagree, 5 - Strongly agree) and five sub-dimensions: self-awareness, academic self-regulation, responsible decision-making, relationship skills, and social awareness. The minimum and maximum scores that can be obtained from SELS-YF were 20 and 100, respectively. Higher scores received points out increased levels of SEL abilities. The exploratory and confirmatory factor analysis ($\chi^2/df = 1.7$, GFI = .89, CFI = .91, AGFI = .86, SRMR = .06, RMSEA = .056) supported the theorized five-factor structure, and criterion validity was proved through the positive correlation ($r = .64$) between the scores obtained from SELS-YF and the scores in mental well-being (Karacan-Özdemir & Büyükçolpan, 2021). Cronbach's alpha score, which is an internal consistency method for reliability evidence, was acceptable for the full scale ($\alpha = .86$) and subscales ($\alpha = .63-.77$).

Warwick-Edinburgh Mental Well-being Scale short form (WEMWBS-SF)

The WEMWBS-SF was originally developed by Tennant et al. (2007) to measure the level of mental well-being of individuals. WEMWBS-SF is a 5-point Likert-type scale where 1 refers to "strongly disagree," and 5 represents "strongly agree." The minimum and maximum scores that can be received from the scale were 14 and 70, respectively. The criterion validity of the scale showed decent results, with obtained significant correlations between mental well-being, life satisfaction, psychological functioning, and overall well-being (Tennant et al., 2007). To ensure reliability evidence, Cronbach's alpha scores and test-retest reliability coefficients were calculated, and they were found .89 and .83, respectively.

The Turkish adaptation of WEMWBS-SF was conducted by Demirtaş and Baytemir (2017). The construct validity of the scale was ensured by confirmatory factor analysis ($\chi^2/df = 1.58$, GFI = .96, CFI = .99, GFI = .96, AGFI = .91, SRMR = .04, RMSEA = .065) and calculating the bivariate correlations among mental well-being, happiness and hope. In the Turkish form, the factor loadings of the items ranged between .57 and .82. The Cronbach's Alpha reliability coefficient of the scale was found to be .84.

Data analysis

All assumptions were checked before conducting the mediation analysis. The sample size, according to $N \geq 50+8m$ (N =minimum sample size, m = number of predictors) criteria (Tabachnick & Fidell, 2013), was adequate. To check for univariate normality, skewness and kurtosis values were checked, and the values ranged between +1 and -1 (Kline, 2005). Additionally, histograms and normal P-P plot graphs were visually inspected, and no violation was found. To identify multivariate outliers, Mahalanobis distances were calculated, and based on the threshold value of 13.82 ($df=2$, $p < .001$) (Tabachnick & Fidell, 2013), two cases were labeled as outliers and removed from the dataset. Bivariate correlations among the study variables were examined to check the multicollinearity assumption, and the results are presented in Table 1. Based on the criteria set by Tabachnick and Fidell (2013), which was VIF (variance inflation factor) being < 10 and TV (tolerance values) being $> .10$, no



violation regarding multicollinearity was found. After all the assumptions were ensured, a mediation analysis was conducted to determine the mediating role of social-emotional learning skills in the relationship between depression and mental well-being. While analyzing the data, the SPSS 25.0 (IBM Corp, 2017) package program was used for assumption checks, and JASP (JASP Team, 2023), which is an R (R Core Team, 2021) based program, was used to conduct mediation analysis.

Results

Descriptive statistics and bivariate correlations

The mean scores obtained for depression, social-emotional learning skills and mental well-being were 8.39 ($SD= 3.89$), 77.11 ($SD= 11.8$), and 24.67 ($SD= 4.87$). It appears that the sample of the current study represents a highly functioning profile, with relatively low scores on depression and high scores in social-emotional learning skills and mental well-being. In Table 1, the bivariate correlations among the study variables are presented. Results indicated that depression was significantly and negatively associated with mental well-being ($r = -.40, p < .01$) and social-emotional learning skills ($r = -.46, p < .01$). There was a positive and significant correlation between mental well-being and social-emotional learning skills ($r = .54, p < .01$).

Table 1.
Descriptive statistics and bivariate correlations among study variables

Variables	1	2	3	M	SD	Skewness	Kurtosis
1. Depression	(.79)			8.38	3.89	-.101	-.518
2. SELS-YF	-.46**	(.85)		77.11	11.8	-.306	-.134
3. WEMWBS-SF	-.40**	.54**	(.80)	24.67	4.87	-.333	-.783

Note. Reliability estimates (α), where available, are displayed in parentheses along the diagonal. Depression = DASS-21 Depression subscale; SELS-YF = Social Emotional Learning Scale-Young Adult Form; WEMWBS-SF = Warwick Edinburg Mental Well-being Scale-Short Form.

**Correlation is significant at the .01 level (two-tailed).

Mediation analysis

A mediation analysis (Hayes, 2022), which is a sophisticated method of correlational method, was utilized to examine whether SEL skills mediated the link between depression and mental well-being. While conducting mediation analysis, 10.000 bootstrapped samples with 95% confidence intervals (CI) were utilized to explore the indirect effects. The results regarding the mediation analysis are presented in Figure 1.

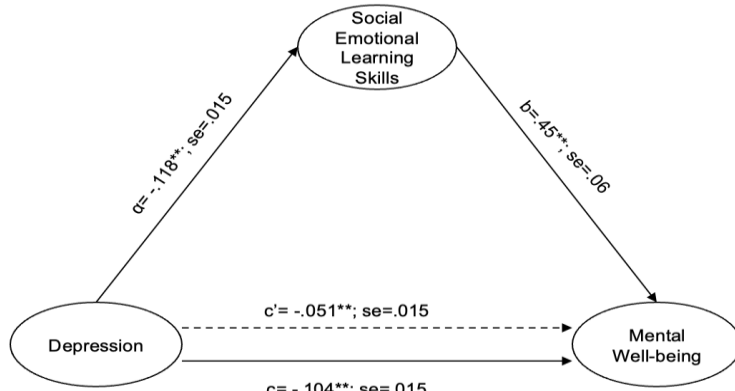


Figure 1. The mediation model of depression and mental well-being mediated by SEL skills

The results of mediation analyses demonstrated that depression had a significant and negative direct effect (total effect; $c = -.10$, $SE = .02$, $p < .01$) on mental well-being. Therefore, Hypothesis 1 was confirmed. When the mediator variable (i.e., SEL skills) was inserted in the model, the direct effect of depression on mental well-being was still negative and significant ($c' = -.05$, $SE = .02$, $p < .01$). Depression had a significant and negative direct relation with SEL skills ($\beta = -.12$, $SE = .02$, $p < 0.01$). In addition, the direct effect of SEL skills ($\beta = .45$, $SE = .06$, $p < .01$) on mental well-being was significantly positive, which supported Hypothesis 2. The results regarding the mediation analyses are depicted in Table 2.

Table 2.
Bootstrapped results of indirect effects.

Paths	B	p	%95 CI	
Depression → SEL Skills → Mental Well-being			LL	UL
Total effect	-.10	<.01	-.134	-.075
Direct effect	-.05	<.01	-.082	-.021
Indirect effect	-.05	<.01	-.072	-.034

Results in Table 2 show that SEL skills partially mediated the relationship between depression and mental well-being as the bootstrap result was significant, $\beta = -.053$, 95% CI [-.072, -.034], $p < .01$, which supported Hypothesis 3. Lastly, the model explained 32% of the variance in mental well-being and 20.7% of the variance in SEL skills.

Discussion, Conclusion and Implications

The purpose of this study was to examine the associations among depression, social-emotional learning skills, and mental well-being in a conveniently selected sample of college students. The results showed that bivariate correlations among study variables were significant, and the directions



regarding all relationships were as expected, supporting the previous research (e.g., Grant et al., 2013; Guerra & Bredshaw, 2008; Horowitz & Garber, 2006).

The results indicated that depression was directly and negatively linked to mental well-being (Hypothesis 1). That is, as the depression level increases, the mental well-being of college students shows a declining trend. This finding is in line with the literature, supported by several cross-sectional (e.g., Grant et al., 2013; Dyrbye et al. 2012) and longitudinal (Keyes et al., 2010; Li et al., 2024) studies. Depression, which manifests itself as prolonged feelings of sadness, hopelessness, and disinterest in daily tasks, can significantly impair the well-being of individuals (Li et al., 2023). Therefore, evaluating mental well-being could provide valuable practical benefits in assessing and preventing depression, as it is known that efforts to increase general well-being bear a protective role against depression as well as the burden that it puts on the healthcare system (Grant et al., 2013). In addition, individuals having higher levels of SEL skills tend to be more resilient and better equipped to handle adversities without succumbing to negative or dysfunctional thoughts or emotions (Reyes et al., 2013). Therefore, resilience fed by SEL skills might act as a protective factor against the onset of depression. Within those lines, interventions aiming to foster SEL skills might become particularly important as they can significantly reduce the negative effect of depression on mental well-being through acquired SEL skills.

The results of the present study indicated that the direct effect of SEL skills on mental well-being was positive and significant (Hypothesis 2). This implies that college students in their twenties who maintain a decent amount of SEL skills are more prone to have higher levels of mental well-being. In a similar vein, a cross-sectional study reached the conclusion that SEL skills have a positive influence on general well-being (Kasikci & Öğülmüş, 2023). To speculate, SEL skills can help people to understand better and effectively manage their emotions and utilize their sources of social support, which are fundamental for mental health and well-being. In consequence, individuals who exhibit higher levels of SEL skills might become more self-aware and attuned to their emotional states and surroundings and can develop resilience, which is one factor that was found to be related to decreased levels of mental health problems such as depression and anxiety (Dai & Smith, 2023; Lyu et al., 2022).

One of the most salient findings of this study is that the indirect effect of depression on mental well-being through SEL skills was significant, indicating that SEL skills remain a protective factor against depression, which, in return, leads to an increase in mental well-being (Hypothesis 3). In other words, SEL skills may serve as a protective factor that alleviates the detrimental effects of depressive symptoms on mental well-being. This finding is important as it implies that SEL skills are crucial in the context of mental health problems. Several cross-sectional studies seem to support this finding, indicating that SEL skills were associated with positive outcomes in mental health (Zins et al., 2007) and well-being (Guerra & Bredshaw, 2008). It was also proved that higher levels of SEL skills were associated with lower levels of depression and anxiety (Horowitz & Garber, 2006; Kautz et al., 2014), implying that improvements in SEL skills can help in preventing and mitigating depression and anxiety, and increasing mental well-being among youth as they provide individuals with essential tools for understanding and managing their emotions, building healthy relationships and making responsible decisions. One possible explanation for this result could be that SEL skills might help individuals recognize and address their own emotional needs, reducing the risk of anxiety, depression, and other mental health issues. Additionally, individuals having trouble dealing with negative emotions or



impairments in emotion regulation skills tend to experience symptoms of depression (Kalra et al., 2018) and studies revealed that divergent dimensions of SEL skills, including emotion regulation (Joorman et al., 2010), self-management skills (Van Grieken et al., 2018), skills and efforts regarding maintaining nurturing relationships (Goodman et al., 2019) and effective decision-making abilities (Leykin et al., 2010) have protective role against depression. The results of the current study pointed out that SEL skills are positively related to mental well-being and inversely related to depression. Therefore, it appears that SEL skills are associated with decreases in depressive symptoms by empowering people to cope with stress, navigate social challenges, and seek support when needed.

Implications

The results pointed out a possible protective role of SEL skills in the relationship between depression and mental well-being. Therefore, integrating SEL into education and community programs can create a supportive environment that enhances overall well-being and resilience, ultimately contributing to better mental health outcomes. Furthermore, schools and communities might consider prioritizing SEL to create a culture of understanding, acceptance, and support. This environment encourages individuals to seek help when needed and fosters a sense of belonging and security. In such settings, mental health issues such as depression can be addressed proactively, reducing stigma and promoting early intervention. Along with that, incorporating SEL skills in various aspects of life contributes to healthier, more resilient individuals and communities, ultimately leading to better mental health outcomes for everyone.

By focusing on enhancing mental well-being, individuals and communities can create environments that support psychological resilience and reduce the prevalence of depressive symptoms. This approach not only benefits individuals by improving their quality of life but also reduces the broader societal impact of depression, including healthcare costs and lost productivity. In essence, prioritizing mental well-being serves as a proactive strategy to combat the detrimental effects of depression, highlighting the need for comprehensive mental health programs and interventions.

Recommendations for further studies

Within the scope of this study, SEL skills were treated as a unitary construct. However, SEL comprises a complex set of abilities, including self-management, social awareness, responsible decision-making, and relationship skills. The results indicated that SEL skills bear a protective role against depression and are positively associated with mental well-being. Therefore, further studies might investigate how divergent aspects of SEL skills could influence mental well-being and/or depression. Additionally, as the sample of the present study consisted of college students, further studies could delve into how SEL skills are associated with depression or mental well-being in different samples, socioeconomic backgrounds, cultures and educational settings. In this study, depressive symptoms were treated as a unitary construct. However, it is very well-known that depression is a multifaceted construct consisting of cognitive, emotional, and behavioral constituents. Therefore, it might be feasible to explore how SEL skills are associated with different aspects of depressive symptoms. Additionally, to establish solid cause-and-effect relationships, further longitudinal studies might assess the association among depression, SEL skills, and mental well-being. With this respect,



tracking individuals over months or years to see how changes in SEL skills affect depression and well-being trajectories might be valuable as entire variables of interest can be subject to slight fluctuations over time. In addition, though we provided initial support for SEL skills being protective against low mental well-being occurring within the presence of depressive symptoms, the mechanism behind how it works in this relationship is not clear. Therefore, conducting interviews with focus groups to explore personal experiences of how SEL skills help manage depression and buffer well-being would be a fruitful endeavor. Lastly, further experimental studies or interventions aiming to improve SEL skills might investigate whether improving SEL skills can reduce depressive symptoms or enhance mental well-being by comparing intervention group(s) with control group(s).

Limitations

Though our findings revealed potential contributing factors and a protective factor in mental well-being, several limitations should be considered while evaluating the results. One major weakness of this study is that the generalizability of the findings is somehow limited, as a non-random sampling method was used. In addition, as the cross-sectional method was used and the data were collected at one point, reaching causal conclusions regarding the variables of the study was not possible. As the data were collected by using self-report instruments, social desirability bias might interfere with the replies provided by the participants.



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