

Optimism in the Context of Social Support: The Mediating Role of Sense of Coherence

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Abstract

Optimism is an important indicator of individuals' psychological well-being. Therefore, revealing variables and models related to optimism may shed light on studies to increase individuals' optimism. The purpose of this study, designed in this direction, is to examine the mediating role of individuals' sense of coherence in the relationship between social support and optimism. The research was conducted with 427 students between the ages of 17-29 at a university in the Eastern Mediterranean Region of Turkey. Data were collected using the Perceived Social Support Scale, the Sense of Coherence Scale, and the Optimism Scale. Relationships between variables were examined with Pearson correlation analysis. In order to investigate the mediator role of sense of coherence on the relationship between social support and optimism, we used PROCESS v3.4 (Model 4) developed by Hayes. The findings show that there are significant relationships between the variables and that the sense of coherence has a mediating role between social support and optimism.

Keywords: Optimism, Social Support, Sense of Coherence



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GENİŞLETİLMİŞ ÖZET

Giriş

Pozitif psikoloji, bireylerde olumlu niteliklerin oluşturulması ve sürdürülmesi süreçlerini inceleyen önemli bir psikoloji alanıdır (Seligman ve Csikszentmihalyi, 2000). Bu alan bireylerin iyilik hâline katkıda bulunacak bazı temel olumlu özelliklere odaklanmaktadır (Seligman ve Csikszentmihalyi, 2000). Odaklanılan bu temel olumlu özelliklerden birisi de iyimserliktir (Carr, 2016). İyimserlik, bireylerin mutluluk ve iyi olma hallerine olumlu katkı sağlayan yapılardan birisidir (Carr, 2016). Bundan dolayı iyimserlik özellikle son yıllarda pek çok araştırmaya konu olmuştur. Bu araştırmalarda iyimserlik üzerinde olumlu etkileri olan temel faktörlerden birisinin sosyal destek olduğu ortaya konmuştur (Cengiz, 2022; Sagi vd., 2021). İyimserlikle ilişkili olduğu belirlenen bir diğer değişken ise bütünlük duygusudur. Hayatı anlaşılabilirlik, yönetilebilirlik ve anlamlılık açısından algılama sürecini yansıtan bütünlük duygusu, bireylerin kimliğinin oluşmasında ve gelişimsel görevlerin yerine getirilmesinde merkezî bir rol oynaması nedeniyle bireylerin iyimserliği açısından oldukça önemli görülmektedir (Boyd vd., 2012). Diğer taraftan bütünlük duygusu sosyal destek ile de ilişkilidir. Çünkü sosyal desteğin kalitesi bütünlük duygusunun olumlu gelişimi için önemli bir durum olarak tanımlanmıştır (Antonovsky, 1987). Bireylerin bütünlük duygusu, sosyal destek kaynaklarından birisi olan direnç kaynaklarını ne ölçüde genelleştirdiklerini gösterir (Stensletten vd., 2016). Görüldüğü üzere bütünlük duygusu bireylerin hem iyimserliği hem de sosyal destek algıları ile ilişkilidir. Ayrıca salutojenik yaklaşım açısından sosyal destek bütünlük duygusunun öncülü iken iyimserlik, bütünlük duygusunun bir sonucu olarak düşünülebilir (Antonovsky, 1987). Buna göre bütünlük duygusu, sosyal destek ile iyimserlik arasındaki ilişkide aracı bir rol oynayabilir.

Amaç

Bu araştırmanın temel amacı, üniversite öğrencilerinin sosyal destek düzeyleri ve iyimserlikleri arasındaki ilişkide bütünlük duygusunun aracı role sahip olup olmadığını ortaya koymaktır.

Yöntem

Bu çalışma nicel paradigma temelinde ilişkisel desende tasarlanmıştır. Araştırmanın katılımcılarını Türkiye'deki bir devlet üniversitesinde öğrenim gören, yaşları 17 ile 29 arasında değişmekte olan 427 lisans öğrencisi oluşturmaktadır. Veriler "Algılanan Sosyal Destek Ölçeği", "Bütünlük Duygusu Ölçeği" ve "İyimserlik Ölçeği" kullanılarak toplanmıştır. Sosyal destek, bütünlük duygusu ve iyimserlik arasındaki ilişkiler Pearson korelasyon analizi ile incelenmiştir. Sosyal destek ile iyimserlik arasındaki ilişkide bütünlük duygusunun aracı rolünü araştırmak amacıyla Hayes (2018) tarafından geliştirilen PROCESS v3.4 (Model 4) kullanılmıştır.

Bulgular

Araştırmada iyimserliğin hem sosyal destek ($r = 0,45$, $p < .01$) hem de bütünlük duygusu ($r = 0,49$, $p < 0,01$) ile pozitif yönde anlamlı bir ilişkiye sahip olduğu bulunmuştur. Ayrıca sosyal destek ile bütünlük duygusu arasında pozitif yönde anlamlı bir ilişki elde edilmiştir ($r = 0,33$, $p < .01$). Aracılık analizine ilişkin bulgulara bakıldığında ise sosyal desteğin iyimserliğin pozitif yönde anlamlı bir yordayıcısı olduğu bulunmuştur ($\beta = 0,30$, $p < .001$). Sosyal destek tek başına iyimserlikteki değişimin yaklaşık %21'ini yordamaktadır ($R^2 = 21$, $p < .001$). Daha sonra sosyal destek ile iyimserlik arasındaki ilişkinin incelendiği modele bütünlük duygusu da dâhil edilmiştir. Üç değişkenli bu model incelendiğinde sosyal desteğin bütünlük duygusu üzerinde anlamlı bir pozitif yordayıcı olduğu görülmüştür ($\beta = .20$, $p < .001$). Bütünlük duygusu ise iyimserliğin pozitif ve anlamlı bir yordayıcısı olarak bulunmuştur ($\beta = .42$, $p < .001$). Sosyal destek ve bütünlük duygusu birlikte iyimserlikteki değişimin yaklaşık %34'ünü açıklamaktadır ($R^2 = 34$, $p < .001$). Ayrıca bütünlük duygusunun modele dâhil edilmesiyle birlikte sosyal destek ile iyimserlik arasındaki yol katsayısının halen anlamlı olduğu ancak ilişki düzeyinde azalma olduğu

görülmüştür ($\beta = .22$, $p < .001$). Yani sosyal desteğin bütünlük duygusu üzerinden iyimserlik üzerindeki dolaylı etkisi anlamlı bulunmuştur ($\beta = 0,08$, $95\%CI = 0,055-0,115$). Ayrıca sosyal desteğin iyimserlik üzerindeki doğrudan etkisi de anlamlıdır ($\beta = 0,22$, $95\%CI = 0,163-0,274$). Yani sosyal destek ile iyimserlik arasındaki ilişkide bütünlük duygusu kısmi aracılık rolü oynamaktadır.

Tartışma, Sonuç ve Öneriler

Bu çalışmada sosyal desteğin, bütünlük duygusu ve iyimserliğin yordayıcısı olduğu sonucuna ulaşılmıştır. Ayrıca sosyal destek ve iyimserlik arasındaki ilişkide bütünlük duygusunun aracı rol oynadığı sonucuna ulaşılmıştır. Cameron (2013) sosyal desteğin bireylerin iyilik hallerinde olumlu bir gelişim sağlayarak iyimserliklerini artırdığını vurgulamaktadır. Nitekim geçmiş araştırmalar, sosyal destekteki artışların iyimserlikteki artışlarla ilişkili olduğunu ortaya koymuştur (Cnen vd., 2021; Marcionetti & Castelli, 2023). Diğer taraftan bütünlük duygusu da iyimserliğin artmasına kaynak olmaktadır. Bu görüşe paralel olarak geçmişte yapılmış araştırma bulguları da bütünlük duygusunun iyimserliğin yordayıcısı olduğunu ortaya koymuştur (Krok, 2015; Yıldız & Cenkseven-Önder, 2021). Bütünlük duygusu, bireylerin genelleştirilmiş dayanıklılık kaynakları arasındadır (Stensletten vd., 2016). Genelleştirilmiş dayanıklılık kaynakları ise önemli psikososyal faktörlerdir ve bunlardan birisi de bireylerin aldığı sosyal destektir (Antonovsky, 1987). Buda sosyal desteğin bütünlük duygusunu beslemesine kaynak olur. Nitekim ampirik araştırma sonuçları da sosyal desteğin bütünlük duygusunun yordayıcısı olduğunu ortaya koymuştur (Kase vd., 2016; Kato vd., 2023). Teorik açıklamalar ve geçmiş araştırma sonuçlarından görüldüğü üzere bütünlük duygusu, sosyal destek ile iyimserlik arasında aracı olabilecek bir değişkendir ve buda araştırmada ulaşılan sonuçlar ile paralellik göstermektedir.

Sosyal Destek Bağlamında İyimserlik: Bütünlük Duygusunun Aracı Rolü

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Öz

İyimserlik bireyin psikolojik iyi oluşunun önemli bir göstergesidir. Dolayısıyla iyimserliğe ilişkin değişkenlerin ve modellerin ortaya konulması bireylerin iyimserliğini artırmaya yönelik çalışmalara ışık tutabilir. Bu doğrultuda tasarlanan bu çalışmanın amacı, sosyal destek ile iyimserlik arasındaki ilişkide bireylerin bütünlük duygusunun aracılık rolünü incelemektir. Araştırma, Türkiye'nin Doğu Akdeniz Bölgesi'ndeki bir üniversitede öğrenim gören 17-29 yaş arası 427 öğrenciyle gerçekleştirilmiştir. Veriler Algılanan Sosyal Destek Ölçeği, Tutarlılık Duygusu Ölçeği ve İyimserlik Ölçeği kullanılarak toplanmıştır. Değişkenler arasındaki ilişkiler Pearson korelasyon analizi ile incelenmiştir. Sosyal destek ile iyimserlik arasındaki ilişkide bütünlük duygusunun aracı rolünü araştırmak amacıyla Hayes tarafından geliştirilen PROCESS v3.4 (Model 4) kullanılmıştır. Ulaşılan bulgular değişkenler arasında anlamlı ilişkiler olduğunu ve bütünlük duygusunun sosyal destek ile iyimserlik arasında aracı rol oynadığını göstermektedir.

Anahtar Kelimeler: İyimserlik, Sosyal Destek, Bütünlük Duygusu



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1. Introduction

The main function of positive psychology is to focus on the mechanisms that can be effective in enabling individuals to withstand internal and external stress factors, thus maintaining optimal functioning in the face of unexpected problems and difficulties brought by daily life (Dunn & Wehmeyer, 2022). At this point, positive psychology focuses on some basic positive characteristics of individuals that will contribute to their well-being and prosperity (Seligman & Csikszentmihalyi, 2000). One of these basic and important positive characteristics that is focused on is optimism (Carr, 2016). Optimism is an important concept within positive psychology and constitutes a structure that contributes positively to individuals' happiness and well-being (Carr, 2016). Optimism, defined as the attitude or tendency to interpret events and different situations positively, is considered a human virtue and power (Santilli et al., 2017). There is strong evidence that optimism is linked to well-being (Krok, 2015). Although optimism is emphasized as a reflection of a cognitive entity, it is also stated that optimism has a side that creates emotions depending on whether the expectations are positive or negative (Carver & Scheier, 2014). The more individuals have faith and confidence that good or beautiful things will happen in the future, the higher the level of optimism can be mentioned (Carver et al., 2010). Optimists believe that their future lives will be surrounded by beautiful events; In other words, they believe that the future that awaits them will bring positive things (Carver & Scheier, 2002).

Optimism and factors that increase optimism have a positive effect on the health of the individual (Söylemez et al., 2023). Uribe et al. (2020) emphasizes that optimism plays an important role in maintaining positive mental health indicators among young people. Optimism can be thought of as choosing positive behaviours or deriving benefits from social and personal opportunities (Mosallanejad et al., 2013). Optimists tend to see problems and troubles as challenges and turn them into opportunities (Söylemez et al., 2023). It has even been shown that greater optimism predicts lower mortality (Galatzer-Levy & Bonanno, 2014). Optimism has been the subject of many studies, especially in recent years, due to its positive effects on individuals.

Optimism is a concept used in the context of interventions aimed at improving well-being rather than eliminating disease and emphasizes the health model (Wood & Johnson, 2016). Therefore, it would be instructive to construct the theoretical framework of a structural model designed to reveal the structures related to optimism in the context of the health model. At this point, the Salutogenic model provides an important theoretical framework. Because Antonovsky (1996) expressed the salutogenic model as an approach that emphasizes health, which can serve as a strong framework for health promotion. The salutogenic approach, with its umbrella model, includes positive health concepts such as quality of life, development and well-being (Antonovsky, 1993). It emphasizes the protection and development of health, especially through structures such as sense of coherence and social support (Antonovsky, 1993; Idan et al., 2017). Thus, Salutogenic model offers insights into the development of health and well-being, both personally and socially (Eriksson, 2017). Therefore, in this research, optimism was examined in the context of sense of coherence and social support variables in line with the theoretical framework presented by the salutogenic model.

1.1. The Relationship Between Social Support and Optimism

Being a social being, human beings must constantly maintain their relationship and communication with their environment. It is almost impossible for individuals to survive without being a part of the group or society they belong to. However, individuals may face many problems, diseases or negativities while living their lives as a part of any group or society. He also needs the people around him to cope with these undesirable situations and

produce solutions (İnan et al., 2024). In this context, the social support an individual receives from his family, friends, environment or a special person is very important in coping with the problems he encounters in his life (Çetinkaya & Korkmaz, 2019).

Social support is a broad term that encompasses a variety of specific features of an individual's social world that can enhance well-being (Cohen et al., 2000). Taylor (2011) defines social support as being cared about by others and having a reliable network that can be consulted when necessary, in daily situations or in certain moments of crisis. Social support is provided from three sources: family, friends or someone special (Zimet et al., 1988). Social support can also be expressed as the psychological support the individual receives from his/her environment (İraz et al., 2021). Social support serves a protective function against undesirable consequences resulting from experiences that are challenging for individuals (Ibarra-Rovillard & Kuiper, 2011).

Social support helps individuals remain psychologically stronger by showing a protective feature against stressful processes (Applebaum et al., 2014). At the same time, it can positively affect coping processes and provide personal development to individuals, making them more successful in the face of stressful processes (Schaefer & Moos, 1998). In summary, the social support individuals receive has a positive impact on their general well-being and psychological health (Cobo-Rendón et al., 2020). Social support, which positively affects individuals' well-being and psychological health, also contributes positively to their optimism (Cengiz, 2022; Sagi et al., 2021). Anlı and Solak (2024) stated that optimists have more social support at the real or perception level, and pessimists have lower social support.

Social support and a warm interpersonal relationship are closely related to individuals' optimism (Anlı & Solak, 2024; Sagi et al., 2021; Smith et al., 2013). Positive relationships provide people with happiness and longevity. Strengthening social relations regulates human behaviour and affects the perspective on events and situations (Taş & Bektaş, 2020). People can feel valuable and safe when they are supported, loved and receive moral support (Taş & Bektaş, 2020). In addition, social support disperses the pessimistic atmosphere because it increases harmony and facilitates the establishment of social relationships (Akin, 2015). Accordingly, it has been determined that individuals' optimism levels about the future increase (Cameron, 2013). In addition, social support can positively affect people's well-being and future expectations by reducing the effects of negative life experiences and stressors (Pugliesi & Shook, 1998). In this case, it is again one of the important sources of increasing individuals' optimism (Seligman, 2006). As can be seen, social support is a variable that may be related to the increase or decrease in individuals' optimism. As a matter of fact, past research has revealed that individuals with high social support generally have high perceived optimism (Cnen et al., 2021; Marcionetti & Castelli, 2023; Sagi et al., 2021). In this regard, we developed the following hypothesis to test in our research:

H₁: Social support is a significant predictor of optimism.

1.2. The Mediating Role of the Sense of Coherence

Sense of coherence (SOC) is one of the important concepts in Antonovsky's (1988) Salutogenic approach. From a salutogenic perspective, health is evaluated not only as the absence of disease but also as the continuity of a healthy state. Therefore, in this approach, the focus is on discovering the sources of individuals' health status rather than the causes of their diseases. At this point, SOC, which is an important concept of the Salutogenic approach, plays an important function because SOC helps individuals turn to the healthy side of life and stay there (Antonovsky, 1988; Grevenstein et al., 2016). Antonovsky (1987) introduced SOC as a salutogenic concept to explain why and how some people can cope better with stress. SOC reflects the individual's ability to cope with tension, use internal and external resources to

solve problems healthily, and the person's general stance towards problems (Antonovsky, 1988).

SOC encompasses three major facets: Comprehensibility, manageability, and meaningfulness (Antonovsky, 1987). Comprehensibility describes an individual's trait to perceive situations and events as clear and structured; manageability represents an individual's belief to hold the necessary skills for dealing with life challenges; and meaningfulness depicts an individual's confidence that any demands and challenges are worthy of investment and engagement. Viewed as a source of resilience, SOC promotes health when people face challenges and stressful life events (Grevenstein et al., 2016). SOC is thought to develop in early adulthood and remain stable throughout life (Antonovsky, 1987). Thanks to SOC, individuals see stressful life events as conditions that provide strength rather than negativity and maintain their well-being (Antonovsky, 1988). There is significant empirical evidence that SOC contributes to well-being (Krampe et al., 2020; Krok, 2022; Yalnız-Yıldırım & Cenkseven-Önder, 2023). Additionally, past studies have shown that SOC is an important protective factor for general health and mental health (Apers et al., 2013; Güngör, 2022; Schaefer et al., 2023).

Antonovsky (1996) states that SOC is a concept related to optimism. SOC, which reflects the process of perceiving life in terms of comprehensibility, manageability and meaningfulness, seems to be very important for individuals' optimism, as it plays a central role in the formation of individual's identity and the fulfilment of developmental tasks (Boyd et al., 2012). It is theorized that SOC will play a mediating role by activating individuals' psychosocial resources, such as personality and social support, enabling them to achieve successful coping and adaptation in response to challenges. Moreover, this has been empirically confirmed in adults (Gana, 2001; Wiesmann & Hannich, 2013). Accordingly, it is expected that individuals will exhibit an optimistic attitude with the perception that they can control future events (Antonovsky, 1996). Because SOC is a higher-order construct of generalized resilience resources, it is hypothesized that people with strong SOC will have more optimistic generalized expectations about the future compared to people with weak SOC (Gustavsson-Lilius et al., 2012). Gustavsson-Lilius et al. (2012) showed in their study that there is more than 30% common variance between SOC and optimism. Consistent with these explanations, past studies have shown that SOC is a predictor of optimism (Krok, 2015; Yıldız & Cenkseven-Önder, 2021).

The quality of social support has also been identified as a crucial coping resource for the positive development of SOC (Antonovsky, 1987). According to the Salutogenic model, SOC mobilizes human resources as a method of coping with stress (what is called generalized resistance resources in the salutogenic model), in addition to individual knowledge, skills, and material and economic affluence (Kase et al., 2016). Individuals' SOC indicates the extent to which they have generalized resistance resources (Stensletten et al., 2016). Generalized resistance resources are biological, material and psychosocial factors that make it easier for people to perceive their lives as coherent, structured and understandable. Social support has been identified as one of these several generalized resistance resources (Antonovsky, 1987). Social support is considered an external resource and plays an important role in promoting SOC in the Salutogenic model (Kato et al., 2023). Social support is considered a contextual variable that has an interactive relationship with SOC, and at this point it is emphasized that social support will have a direct impact on the development of SOC (Srensen et al., 2011). As a matter of fact, Antonovsky and Sagy (1986) emphasized that stable social support will be a source of stronger SOC development. Parallel to this Skärsäter et al. (2005) have found that the salutogenic factor, quality of social support, is a cornerstone in the restoration of a person's SOC because it can be used in interventions that include the person's family or close social network in combination with support to assist the person to view her/his situation as

comprehensible, manageable and meaningful, thereby improving health. Past research findings have shown that social support is a predictor of SOC (Kase et al., 2016; Kato et al., 2023).

As seen in Antonovsky's (1988) Salutogenic approach, it is emphasized that SOC is related to both individuals' optimism and social support. In the salutogenic approach, social support is a precursor to SOC, while optimism can be considered a consequence of SOC. As a matter of fact, this theoretical view has been confirmed in empirical study results. Research has shown that social support is an important predictor of SOC (Krok, 2015; Yıldız & Cenkseven-Önder, 2021), and SOC is an important predictor of optimism (Kase et al., 2016; Kato et al., 2023). Accordingly, SOC may serve a mediating role in the relationship between social support and optimism. To test this, we developed the following hypothesis in our research:

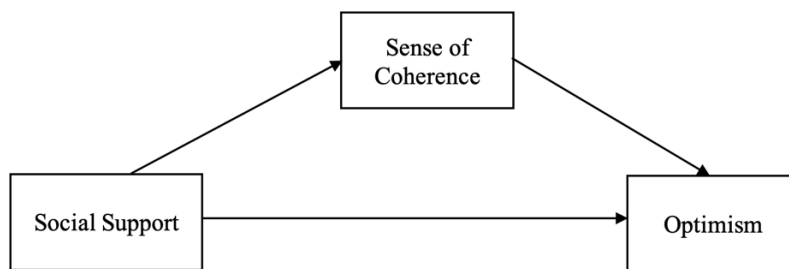
H₂: SOC mediates the relationship between social support and optimism.

1.3. Present Study

Optimism, an important field of study in positive psychology, has been the subject of frequent studies, especially in the context of university students recently (E.g. Bakır, 2022; Pak et al., 2023; Tavakoly-Sany et al., 2023; Zhang et al., 2023). Optimism plays an important role in self-regulation. Optimists cope better with failure and are more persistent in the face of difficulties (Grevenstein et al., 2016). It is emphasized that optimism is also a supportive element in the context of stress and coping (Solak & Anlı, 2023). Optimism is effective in facilitating individuals' adaptation, achieving their goals and objectives, and motivating them for a job (Çetinceli & Mücevher, 2023). It has also been shown that optimism is associated with self-esteem (Wani & Dar, 2017), low depression (Arslan & Yıldırım, 2021) and life satisfaction (Tavakoly-Sany et al., 2023) in university students. These positive effects of optimism on individuals motivate researchers to determine the variables associated with optimism and to conduct studies to reveal models that are the antecedents and consequences of optimism. This is one of the motivations for conducting this research.

Seligman (2006) suggests that optimism is a learnable trait, and that optimism can be gained by acquiring some new cognitive skills. As a matter of fact, when group counselling practices and training programs aimed at improving optimism are examined, it is seen that positive results are obtained, and significant increases occur in individuals' optimism levels (Karagöz, 2011; Seligman, 2006). In Turkey, only one study was found that was designed with an experimental pattern to improve the optimism of university students and tested its effectiveness (Zorbaz et al., 2020). The program tested in that research was designed within the framework of career theories and aimed at improving career optimism. No program designed to improve optimism from a salutogenic perspective has been found. From a positive psychological perspective, this can be considered a deficiency. The results of this research may lead to the preparation of programs that can contribute to the development of optimism of university students in line with the Salutogenic model. This is another source of motivation in conducting the research.

It has been demonstrated many times in research results that social support is a predictor of optimism (E.g. Cengiz, 2022; Sagi et al., 2021; Taş & Bektaş, 2020). However, it is also important to determine the source of this predictive state. In other words, it is important to reveal the structures that mediate the effect of social support on optimism. Thus, practices that increase the effect of social support on optimism can be designed. This is one of the important motivations for conducting this research. In the light of these explanations, the aim of this research is to reveal whether SOC has a mediating role in the relationship between social support and optimism. Figure 1 shows the mediation model of the current study.

Figure 1.*The hypothesized model*

2. Method

This research is a mediation study designed in a quantitative research type with a relational design. Relational design research is a research design in which the existence or degree of change between two or more variables is determined (Karasar, 2013). In the study, the relationships between optimism, social support and sense of coherence were examined. The predicted variable of the study is optimism, the predictive variable is social support, and the mediator variable is sense of coherence.

2.1. Participants

The study participants were determined using the convenience sampling method. 427 students studying at a state university in Turkey participated in this research. The ages of the participants ranged between 17 and 29, and the average age was 20.67 (SD: 2.21). The distribution of participants in terms of grade level and gender is presented in Table 1.

Table 1.*Distribution of the Students by Gender and Class Level*

Class Level	Female		Male		Total	
	f	%	f	%	f	%
1st year	29	6.8	20	4.7	49	11.5
2nd year	54	12.6	31	7.3	85	19.9
3rd year	122	28.6	59	13.8	181	42.4
4th year	66	15.5	46	10.7	112	26.2
Total	271	63.5	156	36.5	427	100

2.2. Measures

2.2.1. Perceived Social Support Scale

Developed by Zimet et al (1988). It was adapted into Turkish by Eker and Arkar (1995). The scale, which is a 7-point Likert type, consists of 12 items in total. The scale has 12 items and three subscales: family, friends and special people. The increase in scores obtained from the scale reflects individuals' opinions that they receive sufficient social support. In the adaptation study, the researchers examined the scale on different sample groups. They reached values between .80 and .95 in the results of the internal consistency analysis conducted in these different groups. In this study, the Cronbach's alpha internal consistency coefficient was found to be .89.

2.2.2. Sense of Coherence Scale

It was developed by Antonovsky (1987). Scherler and Lajunen (1997) made the Turkish adaptation of the scale. The scale consists of 13 items and is a 7-point Likert type. It is a three-dimensional scale (comprehensibility, manageability, and meaningfulness). Increasing scores indicate an increased sense of individual coherence. In the adaptation study, the Cronbach's alpha value calculated within the scope of reliability analysis was found to be .69. In this study, Cronbach's alpha value was found to be .71.

2.2.3. Optimism Scale

It was developed by Balci and Yilmaz (2002). Later, Yilmaz et al. (2023) and its validity and reliability studies were redone and revised. The scale, consisting of 19 items, has a single-factor structure. The scale is a four-point Likert type. High scores indicate that individuals are more optimistic. Yilmaz et al. (2023) found the Cronbach's alpha internal consistency coefficient of the scale they calculated within the scope of reliability analysis to be .91. In this study, the Cronbach's alpha value of the scale was found to be .89.

2.3. Procedures and Ethics

The study data were collected from volunteer university students. Data were collected from participants face to face using paper and pencil. All the participants gave their written informed consent. No personally identifiable information was requested from the participants.

2.4. Data Analysis

First of all, it was examined whether the data collected from the participants showed a normal distribution. Normality was examined by looking at kurtosis and skewness values. Kurtosis and skewness values being between +1 and -1 indicate normal distribution (Tabachnick & Fidell, 2007). It was observed that the collected data showed normal distribution (Table 2). Then, the relationships between social support, sense of coherence, and optimism were examined with Pearson correlation analysis. In order to investigate the mediator role of a sense of coherence in the relationship between social support and optimism, we used PROCESS v3.4 (Model 4), developed by Hayes (2018). Model 4 is used when testing the existence of a mediating role and presents results regarding the direct effect, indirect effect, and total effect between variables. Before the mediation analysis, assumptions regarding Process Model 4 such as normality, homogeneity, linearity, autocorrelation and multicollinearity were tested. It was observed that the data showed a homogeneous distribution. Variables (dependent variable and independent and mediator variables) were checked with a scatter plot and a linear relationship was observed. The data did not show multicollinearity. Durbin-Watson coefficient was used to test autocorrelation. In all analyses, Durbin-Watson values were found to be between 1.81 and 2.11. This statistic takes values between 0 and 4 points. A statistical value of around 2 is interpreted as there being no autocorrelation problem (Kalayci, 2006). The results show that there is no autocorrelation problem. For the bootstrapping, 10000 bootstrap samples and 95% confidence intervals were generated. Pearson correlation analysis and analyzes for normality, linearity, homogeneity, autocorrelation and multicollinearity were performed with the SPSS 24.0 program.

3. Findings

3.1. Preliminary Analyses

The descriptive statistics and correlation coefficients for the variables are given in Table 2.

Table 2.*Descriptive Statistics and Correlation Analysis Results*

Variables	1	2	3
1. Social Support	-		
2. Sense of Coherence	.33**	-	
3. Optimism	.45**	.49**	-
Mean	58.78	49.65	56.24
Standard Deviation	15.54	9.67	10.39
Kurtosis	-.25	.04	-.57
Skewness	-.58	-.11	.06

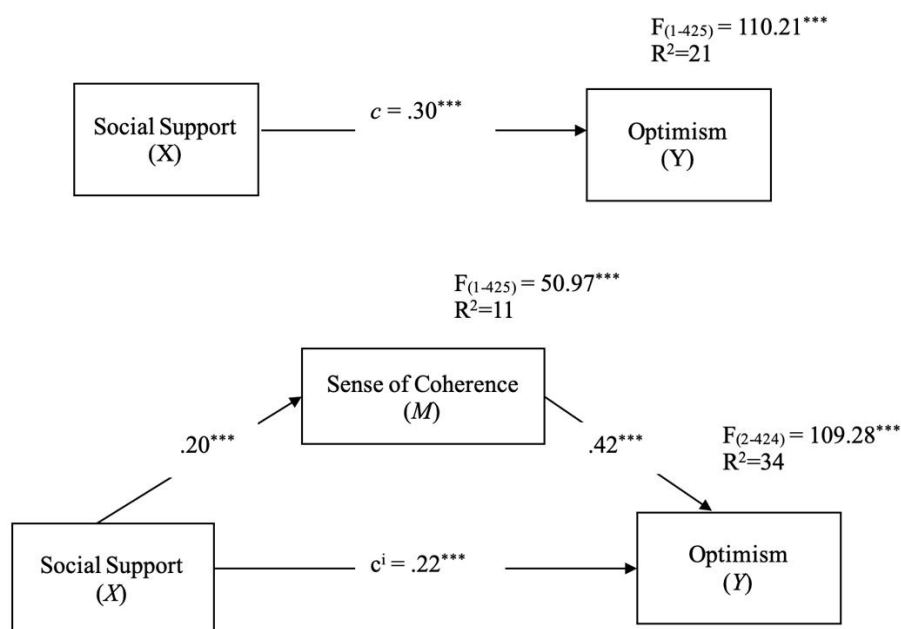
As seen in Table 2, optimism was found to have a positive significant relationship with both social support ($r = .45$, $p < .01$) and SOC ($r = .49$, $p < .01$). Additionally, a positive significant relationship was obtained between social support and SOC ($r = .33$, $p < .01$).

3.2. Mediation Analysis Findings

In the study, the mediating role of a sense of coherence in the relationship between social support and optimism was tested. The path coefficient between the variables is presented in Figure 2.

Figure 2.

The path coefficient between the variables



As seen in Figure 2, first the path coefficient between social support and optimism was examined. Social support was found to be a positively significant predictor of optimism ($\beta = .30$, $p < .001$). Social support alone predicts approximately 21% of the change in optimism ($R^2 = 21$, $p < .001$). Then, the sense of coherence was included in the model in which the relationship between social support and optimism was examined. When this three-variable model was examined, it was observed that social support was a significant positive predictor of the sense

of coherence ($\beta = .20, p < .001$). It was observed that the sense of coherence was a positive and significant predictor of optimism ($\beta = .42, p < .001$). Social support and sense of coherence together explain approximately 34% of the variation in optimism ($R^2 = 34, p < .001$). In addition, with the inclusion of the sense of coherence in the model, it was observed that the path coefficient value between social support and optimism was still significant, but there was a decrease in the level of relationship ($\beta = .22, p < .001$). Statistical significance of the indirect effect within the tested model in this study and bootstrapping results with upper and lower limits of %95 confidence intervals were given in Table 3.

Table 3.

The Findings of Bootstrapping Coefficients and Confidence Intervals

Effect	Bootstrap ^a Coefficient	SE	<i>t</i>	Lower Limit ^b	Upper Limit ^b
Total effect	.304	.028	10.49	.246	.360
Direct effect	.220	.027	7.83	.163	.274
Indirect effect	.084			.055	.115

Note ^a Unstandardized; Based on 10,000 bootstrap samples, ^b %95 confidence intervals

As seen in Table 3, the indirect effect of social support on optimism through the sense of coherence was found to be significant ($\beta = .08, 95\%CI = .055, .115$). Additionally, the direct effect of social support on optimism is also significant ($\beta = .22, 95\%CI = .163, .274$). In other words, the sense of coherence plays a partial mediator role in the relationship between social support and optimism.

4. Discussion, Conclusion and Recommendations

This study examined the relationship between social support, sense of coherence, and optimism among university students. The research concluded that social support is a predictor of optimism. Another result is that SOC plays a mediating role in the relationship between social support and optimism. The results obtained in the research are discussed below in light of past research results.

The first hypothesis (H_1) of this research was that social support would be a predictor of optimism. H_1 is confirmed. Social support makes individuals feel important to others (Taylor, 2011). This support also reflects psychological support (Ibarra-Rovillard & Kuiper, 2011). In other words, social support is also considered as a protective element against stressful processes for individuals (Applebaum et al., 2014; Pugliesi & Shook, 1998). Feeling valuable, important and having psychological support can be a source for individuals to look at the future more optimistically. Additionally, Cameron (2013) emphasizes that social support increases individuals' optimism by providing a positive improvement in their well-being. On the contrary, individuals' failure to evaluate the social support they receive as sufficient may lead to a decrease in their fighting power and a pessimistic perspective instead of an optimistic one (Seligman, 2006). Besides all this, optimism is an important psychological capital dimension (Luthans, 2012). Social support is an important variable associated with the increase in psychological capital (Zou et al., 2020). Individuals increase their psychological capital and thus their optimism by investing in their mental state with the social support they receive (Schug et al., 2021; Zou et al., 2020). In this case, increased social support may contribute to the development of optimism. Additionally, Conservation of Resources Theory posits that social support is an important resource that facilitates the building of positive psychological resources (Hobfoll, 2002; Newman et al., 2018). Optimism is an important positive psychological resource. These situations may be effective in social support being a predictor of optimism in this study. The result we reached in the research is parallel to the results of similar

research. Past research has observed that increases in social support are associated with increases in optimism (Cnen et al., 2021; Marcionetti & Castelli, 2023; Sagi et al., 2021).

Another hypothesis (H_2) in this research was that SOC would play a mediating role in the relationship between social support and optimism. H_2 has been confirmed. SOC serves as a mediator between social support and optimism. In other words, increased SOC due to social support is a source of increase in optimism. SOC is one of the indicators of individuals' generalized resilience resources (Stensletten et al., 2016). Generalized resilience resources are important psychosocial factors, and one of these generalized resilience resources is the social support individuals receive (Antonovsky, 1987). In addition, social support is considered a contextual structure that has an interactive relationship with SOC, and it is emphasized that social support will contribute to the development of SOC (Srensen et al., 2011). As a matter of fact, consistent with this view, empirical research results have revealed that social support is a predictor of SOC (Kase et al., 2016; Kato et al., 2023). On the other hand, in the salutogenic approach, it is stated that SOC is a concept related to optimism (Antonovsky, 1996). Because SOC reflects a psychosocial structure such as generalizes resilience resources, people with strong SOC will have more optimistic generalized expectations about the future compared to people with weak SOC (Gustavsson-Lilius et al., 2012). Additionally, SOC improves health when people face challenges and stressful life events (Grevenstein et al., 2016). This situation helps individuals maintain their well-being and be optimistic (Antonovsky, 1988). In parallel with these views, research findings have also revealed that SOC is predictive of optimism (Krok, 2015; Yıldız & Cenkseven-Önder, 2021). SOC sub-dimensions refer to different psychological domains, namely cognitive (comprehensibility), affective (meaningfulness), and behavioral (manageability) (Antonovsky, 1993), and could play a different role in health-related behaviors (Adorni et al., 2021). The comprehensiveness of an individual's social environment can contribute to optimism by providing an important cognitive competence. Meaningfulness, on the other hand, can strengthen the individual emotionally and contribute to her optimism. Thus, through manageability, the individual can direct her behavior in line with her optimism and reinforce her optimism belief. This contributes to SOC being an important mediating variable between social support and optimism. Consistent with theoretical views, research findings show that social support is predictive of SOC, and SOC is predictive of optimism. This shows that SOC is a variable that can serve as a mediator between social support and optimism. As a matter of fact, we reached such a result in our research.

This research has some limitations. Firstly, all data were based entirely on self-report measures, which can be influenced by social desirability response bias. The findings on the variables also based on these self-report measures used in this study. Therefore, future studies may use different measuring tools to avoid this limitation. Secondly, since our research is a cross-sectional study, it is not suitable for making sharp causal inferences. Therefore, experimental studies can be designed that will allow strong causal inferences to be made between the variables found in this research. This research was conducted with Turkish students at a university in the Eastern Mediterranean Region. This is another limitation of the research. Generalizability of the results can be ensured by conducting similar research with individuals from different regions, societies and cultures. Another limitation of the study is that the effects of socio-demographic characteristics of the participants, which may have an impact on the variables, were not controlled for the relationships between the variables.

In line with the results obtained in the research, some suggestions are presented for practitioners and researchers. Firstly, notwithstanding these limitations, the findings of our study made a contribution to positive psychology literature. In individual or group studies aimed at increasing individuals' optimism, studies that improve social support and sense of coherence can be carried out. University psychological counseling units can focus on the development of social support and sense of coherence in their studies designed for individuals

who have problems with optimism for the future. Additionally, student club organizations that provide social support to increase the optimism of university students can be provided. On the other hand, researchers can design studies to identify moderating variables that reduce or increase the effects of the mediating role of sense of coherence in the relationship between social support and optimism. In addition, it can conduct qualitative paradigm-based research that will provide in-depth information to determine how sense of coherence affects the relationship between social support and optimism.

Conflict of Interest

The authors declare that there is no conflict of interest with any institution or person within the scope of the study.

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Ethical Approval

The study was performed under the Declaration of Helsinki and was approved and registered by the Ethics Committee of Çukurova University.

Artificial Intelligence Usage

The authors did not use any artificial intelligence tools in the research, authorship, and/or publication of this article.

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