


# Feelings of fraud among women in Turkey: Prevalence and demographic risk factors of the Impostor Phenomenon

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## Keywords

Impostor Phenomenon, prevalence, demographic risk factors, mental health

## Anahtar kelimeler

Sahtekâr Fenomeni, yaygınlık, demografik risk faktörleri, mental sağlık

## Abstract

The Impostor Phenomenon is defined as the inability of individuals to internalize their achievements, believing they are fraudulent. The first aim of this study is to determine the prevalence of the Impostor Phenomenon in women in Turkey. The second aim of the present study is to describe the demographic risk factors of the Impostor Phenomenon. A total of 677 women who work or are undergraduate/graduate students in one of Turkey's four metropolitan cities (Ankara, Bursa, Istanbul, and Izmir) participated in the research. The data were collected online using the snowball technique. The ages of the participants ranged from 18 to 65 years ( $M_{age} = 31.36$ ,  $SD = 9.67$ ). The Clance Impostor Phenomenon Scale was used to measure the Impostor Phenomenon, and the Demographic Information Form was used to collect demographic characteristics. The findings showed that 65.73% of the participants had feelings of fraud at least at a moderate level. About 3% of them suffered from the Impostor Phenomenon intensely. In addition, it was found that the Impostor Phenomenon increased as age and duration of occupation decreased. When age was controlled for, it was revealed that low socio-economic status, postgraduate studentship, and postgraduate degree were associated with increased Impostor Phenomenon levels. These findings are discussed in light of the literature on the Impostor Phenomenon and mental health.

## Öz

### Türkiye'deki kadınlarda sahtelik hisleri: Sahtekâr fenomeninin yaygınlığı ve demografik risk faktörleri

Sahtekâr Fenomeni kişilerin başarılarını içselleştirememeleri ve kendilerinin birer sahtekâr olduklarına inanmaları olarak tanımlanır. Bu çalışmanın ilk amacı Türkiye'deki kadınlarda Sahtekâr Fenomeninin yaygınlığını tespit etmektir. Çalışmanın ikinci amacı ise Sahtekâr Fenomeninin demografik risk faktörlerini betimlemektir. Araştırmaya Türkiye'nin dört büyükşehirinden birinde (Ankara, Bursa, İstanbul ve İzmir) çalışan ya da lisans/lisansüstü öğrencisi olan 677 kadın katılmıştır. Veriler çevrimiçi şekilde kartopu örnekleme tekniği kullanılarak toplanmıştır. Katılımcıların yaşları 18 ile 65 yaş arasında değişmektedir ( $Ort.yaş = 31.36$ ,  $SS = 9.67$ ). Sahtekâr Fenomenini ölçmek için Clance Sahtekâr Fenomeni Ölçeği, demografik bilgileri toplamak için Demografik Bilgi Formu kullanılmıştır. Bulgular, katılımcıların %65.73'ünün ez az orta derecede sahtelik hislerine sahip olduğunu göstermiştir. Bu katılımcıların yaklaşık %3'ü yoğun düzeyde Sahtekâr Fenomeninden muzdariptir. Ayrıca yaş ve meslekteki süre azaldıkça Sahtekâr Fenomeninin arttığı bulunmuştur. Yaş kontrol edildiğinde, alt sosyo-ekonomik durum, lisansüstü öğrenciliği ve lisansüstü mezuniyetinin artan Sahtekâr Fenomeni düzeyleriyle ilişkili olduğu açığa çıkarılmıştır. Bu bulgular, Sahtekâr Fenomeni ve mental sağlık alanyazını ışığında tartışılmıştır.

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Gender inequality against women is one of the most critical problems in the world. The Global Gender Gap Report (World Economic Forum, 2022), focusing on data from 146 countries, including Turkey, pointed out that 132 years are needed to eliminate gender inequality in economic participation, health, education, and politics if the current rate of progress is maintained. Moreover, as studies suggest, this disadvantaged position of women negatively affects their mental health (e.g., Kim et al., 2022; Milner et al., 2021; Tesch-Römer et al., 2008).

The Impostor Phenomenon (IP) is an important concept regarding the effects of women's disadvantaged positions in society on their mental health. Clance and Imes (1978), in their clinical observations of high achieving women clients, found that these women could not internalize their success, and they attributed their accomplishments to some external and temporary condition, such as luck, as a result of the false messages by their family and society about "success". In addition, these women believed they were phonies and feared being discovered.

IP is briefly defined as believing that oneself is an impostor due to not internalizing a successful position and feelings of unrealistic fear of being revealed as a fraud (Clance & Imes, 1978). Studies have indicated that as IP levels increase, self-esteem (Mascarenhas et al., 2019; Naser et al., 2022; Peteet et al., 2015; Schubert & Bowker, 2019) and well-being (September et al., 2001) decrease. It has also been shown that high levels of IP are associated with increased levels of depression (Fimiani et al., 2021; Mirel & Ögel-Balaban, 2021; Tigranyan et al., 2021; Wang et al., 2019), stress (Levant et al., 2020), anxiety (Liu et al., 2022; Maftai et al., 2021; Şahin & Gülşen, 2022), and burnout syndrome (Alranyes et al., 2020; Clark et al., 2022; Liu et al., 2022; Villwock et al., 2016). Furthermore, Brennan-Wydra et al. (2021) have revealed a positive relationship between IP and suicidal ideation, which again emphasizes the importance of IP in mental health.

Although studies conducted in the following years have revealed that IP may also be observed in men, many studies have pointed out that IP levels of women are higher than of men (e.g., Alsaleem et al., 2021; Cusack et al., 2013; Holliday et al., 2020; Patzak et al., 2017). Also, Clance and O'Toole (1987) have argued that IP may have negative consequences for women, including quitting their careers, but not for men. According to the researchers, even if men experience negative emotions, they are supported by society in their success. However, women do not have such support. Therefore, feelings of fraud prevent women from fulfilling their potential (Clance & O'Toole, 1987). Also, studies on gender stereotypes supported that IP may be more critical for women. For example, Patzak et al. (2017) showed that feminine gender roles increased feelings of fraud. Fassl et al. (2020) pointed out that IP increased negative feminine stereotypes but was not associated with negative masculine

stereotypes. Özdemir and Kuşdil (2016) found that not being similar to the group prototype in terms of occupational and masculine stereotypes was associated with increased IP levels in women. These findings on gender stereotypes indicate that women may have a higher risk of IP, especially in societies where traditional gender roles are prominent.

Moreover, according to the findings, increased IP levels are related to increased fear of success (Jöstl et al., 2012), procrastination (Maftai et al., 2021; Rohrmann et al., 2016), self-handicapping (Jensen & Deemer, 2020; Want & Kleitman, 2006), and feminine gender-based self-debilitating behaviors (Özdemir & Kuşdil, 2016), which are expected to affect academic and professional success negatively. Therefore, IP, which can be considered a product of gender inequality, can also become a structure perpetuating this inequality when women have feelings of fraud. Because the inequalities between groups in a society do not persist only because of the advantaged group; at the same time, the disadvantaged group can internalize these inequalities and prevent themselves from accessing resources to improve their position (see Sidanius & Pratto, 1999).

Based on these findings, it can be estimated that women are at a greater risk for IP. It may be important to identify which women are more likely to experience IP to empower women against this risk. However, when the literature is examined, it is revealed that research on creating a comprehensive risk profile for women is quite limited.

Although IP has been studied in Western societies for many years, it has only recently been investigated in Turkey (e.g., Akın et al., 2015; Mirel & Ögel Balaban, 2021; Özdemir & Kuşdil, 2016; Şahin & Gülşen, 2022). To the best of our knowledge, no research has yet been conducted on the prevalence of IP among women in Turkey. The current study aims to examine the prevalence of IP in Turkish women and explore the relationship between IP and demographic characteristics.

### *Impostor Phenomenon and Culture*

IP, by definition, is closely related to "success" and "failure". Empirical studies also support this argument. For example, it is known that IP is positively associated with fear of success and failure (Jensen & Deemer, 2020; Jöstl et al., 2012; Koshy et al., 2022). In addition, individuals with feelings of fraud were found to experience more shame in the event of failure (Hudson & González-Gómez, 2021). Another study revealed that as IP increased, the motivation for success decreased (Tigranyan et al., 2021). Moreover, it was found that individuals with feelings of fraud tend to view success as a competition rather than a personal development (Ross et al., 2001). When success was achieved through collaboration, these individuals reported less satisfaction (Ross et al., 2001). In

summary, it is possible to suggest that IP relates to success and failure situations and the meanings attributed to these concepts.

On the other hand, culture is one of the most important frameworks we use to make sense of ourselves and our environment. There are some structural differences between cultures. The most well-known of these are called “individualism” and “collectivism” (see Hofstede, 2001, 2011; Kim et al., 1994; Triandis, 2001). In individualistic cultures, the independence of individuals, the protection of mutual interests in relationships, and personal goals are given priority. In collective cultures, on the other hand, relationships, interdependence, and shared goals of the group are seen as crucial (Triandis, 2001). These differences between cultures could lead to many differences in many areas. Accordingly, culture may determine how we attribute meanings to concepts such as “success” and “failure”.

Indeed, cross-cultural studies have supported this prediction (e.g., Banker & Leary, 2020; Endo & Meijer, 2004; Zhang & Cross, 2011). For example, Endo and Meijer (2004) found that individuals with an individualistic culture remembered their successes more than their failures and made more internal references to their success. In addition, it was observed that the possibility of these individuals explaining their success and failure by chance was the same. On the other hand, for the members of a collectivist culture, the recall of memories related to success and failure was equal. However, the frequency of attributing success to chance was significantly higher than that of attributing failure to chance. Zhang and Cross (2011) explored how culture led to differences in response to success and failure. In this study, it was pointed out that the members of the collectivist community had a higher tolerance for failure than the individualist ones. In contrast to the individualists, members of a collectivist culture viewed their failures as less self-destructive. In addition, Banker and Leary (2020) revealed that those with collective cultural values, unlike those with individualistic values, attached greater importance to humility and believed they do not deserve special treatment for their achievements.

It is possible to think that such differences between cultures may lead to differences in the experience of IP. However, most of the research related to IP is from the West (see Bravata et al., 2020); our knowledge of cultural differences in IP is very limited. Some studies showed that feelings of fraud were also experienced in collectivist cultures (e.g., Alranyes et al., 2020; Alsaleem et al., 2021; Chae et al., 1995; Thomas & Bigatti, 2020; Yousef Jeledan, 2019). There are studies to investigate IP in Turkey, which has a collectivist culture, although it is relatively few (Akın et al., 2015; Mirel & Ögel-Balaban, 2021; Özdemir & Kuşdil, 2016; Şahin & Gülşen, 2022). These studies demonstrated that some tools used to measure levels of IP are valid and reliable in Turkey as well (Akın et al., 2015;

Özdemir & Kuşdil, 2016; Şahin & Gülşen, 2022). Furthermore, they exposed that the antecedents of these feelings in Turkey may be similar to those in the Western countries. Accordingly, high maladaptive perfectionism (Mirel & Ögel-Balaban, 2021), low self-esteem (Şahin & Gülşen, 2022), and feminine gender stereotypes (Özdemir & Kuşdil, 2016) increased IP in Turkish people. At the same time, these studies revealed that those who experience feelings of fraud in Turkey had increased levels of depression (Mirel & Ögel-Balaban, 2021) and anxiety (Şahin & Gülşen, 2022).

In summary, it is possible to think that culture may have an effect on the experience of IP. However, research indicated that the IP had similar antecedents and consequences across cultures. On the other hand, the knowledge about IP in collectivist cultures still needs to be improved. For example, it can be argued that cultural differences may change the prevalence of IP from society to society. Since individualistic communities reward individual achievement, feelings of fraud may be more common in these societies. On the other hand, based on the finding that people from a collectivist culture attribute their successes, but not their failures, to luck, it may be expected that IP is more common in collectivist communities. Moreover, culture may also differentiate what is expected of women among different societies. In collectivist communities, expectations for women to conform more traditional gender roles could be higher. This, in turn, can affect awareness of gender inequalities and the motivation to deal with these inequalities (Haj-Yahia & Sadan, 2008). This may make it more difficult for women with collectivist values to internalize their own achievements. Therefore, in order to develop an understanding of IP in collectivist societies such as Turkey, there is a need to further investigate these feelings in these cultures.

### *Prevalence of Impostor Phenomenon*

Scientists have estimated that many people experience the negative consequences of impostor feelings. Clance and Matthews, who have been studying IP for many years, stated in an interview that approximately 70% of people in America have struggled with intense feelings of fraud at some point in their lives. This rate shocked even the researchers themselves (Gravious, 2007).

A recent study on the prevalence of IP was conducted by Bravata et al. (2020). Bravata et al. (2020) reviewed and systematically analyzed research articles published on IP between 1990 and 2018. In this study, the researchers found that the prevalence of IP reported in the literature ranged from 9% to 82%. According to the researchers, the reason for this wide range is that different ways are used in studies for identifying individuals suffering from IP.

Indeed, three different ways of interpreting the results to identify those with impostor feelings are used. The first is the classification system proposed by Clance (1985). This system is used for the Clance Impostor Phenomenon Scale ([CIPS]; Clance, 1985), a 5-point Likert-type scale involving 20 items. According to Clance (1985), those who score 40 or less on the CIPS experience IP rarely, while those who score 41-60 experience it moderately. A score between 61 and 80 on the CIPS indicates that feelings of fraud are experienced frequently, and a score above 80 shows that these feelings are experienced very intensely. Many studies in the literature have used these scores (e.g., Holliday et al., 2020; Landry et al., 2022; Mascarenhas et al., 2019; Patzak et al., 2017). The second way is the use of a cut-off score, which is calculated from the total score of the IP scale used the studies, to classify participants as having IP (impostors) or not (non-impostors). For example, Holmes et al. (1993) suggested that the cut-off score of the CIPS should be 62 in order to minimize the number of false positives and false negatives. There are also many studies in which this cut-off score is used (e.g., Christensen et al., 2016; Ikbaal & Salim Musa, 2018; Landry et al., 2022; Leach et al., 2019). The third way is to calculate a particular cut-off score for each study. Researchers may determine this specific cut-off score by calculating the median (e.g., McElwee & Yurak, 2007) or mean, and standard deviation (e.g., Ferrari, 2005) of the participants' scores on the IP scale used in their study.

Most of the studies reviewed by Bravata et al. (2020) analyzed the prevalence of IP regardless of gender, though many studies showed that intense feelings of fraud were more common in women (e.g., Al-saleem et al., 2021; Cusack et al., 2013; Holliday et al., 2020; Patzak et al., 2017). Considering that IP might lead to more negative outcomes for women, it may be important to examine the prevalence of IP in the female population separately. In addition, most of the research analyzed by Bravata et al. (2020) was conducted in Western societies, and the knowledge about the prevalence of IP in Eastern cultures still needs to be improved. For example, Yousef Jeledan (2019) examined the prevalence of IP among female postgraduate students in Medina. In this study, which was conducted with a small number of participants ( $n = 60$ ), it was observed that 26.66% of Medina female students rarely experienced feelings of fraud, while 23.33% of them did so frequently. Thomas and Bigatti (2020), in a more comprehensive study, examined eight studies involving medical students in Malaysia and India. In this study, the prevalence of IP varied between 22.5% and 46.6%. The number of IP studies carried out in Turkey is still quite limited (e.g., Akın et al., 2015; Mirel & Ögel Balaban, 2021; Özdemir & Kuşdil, 2016; Şahin & Gülşen, 2022), and the prevalence of impostor feelings in our country has not been studied yet. Therefore, more research is needed to improve the understanding of IP in Turkish women.

### *Impostor Phenomenon and Demographic Characteristics*

It is essential to identify demographic risk factors in order to understand the mental health situation in society and improve the mental health of the population (World Health Organization [WHO], 2004/2020). Few studies have examined the demographic risk factors of IP, and the findings of those which did are often contradictory to one another.

The demographic characteristic whose relationship with IP has been most frequently investigated is age. Some studies have indicated that feelings of fraud decrease with increasing age (e.g., Barr-Walker et al., 2019; Clark et al., 2022; Egwurugwu et al., 2018; Holliday et al., 2020; Landry et al., 2022; McLean & Avella, 2016; Pannhausen et al., 2022). On the other hand, some studies did not find such a relationship between the phenomenon and age (e.g., Camara et al., 2022; Grubb & Grubb, 2021; Maftai et al., 2021; Naser et al., 2022; Vergauwe et al., 2015; Want & Kleitman, 2006).

Another demographic characteristic whose relationship with IP has been investigated is marital status. In a study conducted by Egwurugwu et al. (2018) with medical students in Nigeria, it was found that single participants had higher IP levels than married ones. However, some studies did not find any relationship between marital status and IP (Kimball et al., 2021; Sullivan & Ryba, 2020).

IP might be a presumed risk for people with high education and socio-economic status (SES) because it is characterized by the inability to internalize successful positions. However, some researchers have reported contradictory findings. For example, Landry et al. (2022) found that nutritionists with bachelor's degrees had higher levels of IP than those with doctorate degrees. Some studies indicated no relationship between education level and IP (Maftai et al., 2021; McLean & Avella, 2016). Conversely, Pervez et al. (2021) revealed that doctoral students had a much higher risk of IP than the general population. On the other hand, MacInnis et al. (2019) showed that low SES predicted increased IP scores, while Mascarenhas et al. (2019) pointed out that IP may be common regardless of household income or SES.

Based on her clinical observations, Clance (1985) stated that IP is often triggered when starting a new job or a project. Therefore, the phenomenon is expected to be related to experience level. The findings of some studies are consistent with these clinical observations and demonstrate that IP increased as the duration of occupation decreased (Barr-Walker et al., 2019; Clark et al., 2014, 2022; Kumar et al., 2021). However, there are also studies in the literature where this relationship could not be found (e.g., Paladugu et al., 2021).

The relationship between IP and the sector of employment has also been investigated, though the prevalence of these studies is low. Leonhardt et al. (2017)

found that public-sector workers have higher IP levels than private-sector workers. Researchers have explained this finding with the fact that the public sector offers more limited opportunities than the private. However, Haar and de Jong (2022) could not support this relationship in their study.

In summary, the relationships between IP and age, marital status, education, SES, duration of occupation, and employment sector have been investigated. However, the findings are inconsistent with each other. One reason for these discrepancies may be that most studies were conducted on younger samples, such as undergraduate students (Bravata et al., 2020). There is a need to examine the relationship between IP and demographic characteristics in a sample with a wide age range to reveal the risk factors of IP. Another possible reason is that the demographic characteristics outlined above are mostly age-related. In other words, marital status, education, SES, working status, and duration of occupation may change with age. The significant relationships detected in previous studies may basically be the result of the relationship between IP and age. Therefore, there is a need to examine the possible relationship between IP and these demographic characteristics by controlling for age.

### **The Present Study**

Studies on IP's prevalence are mainly from the West (see Bravata et al., 2020). It is noteworthy that research on IP in Turkey is relatively new and addressed only in a few studies (e.g., Mirel & Ögel Balaban, 2021; Özdemir & Kuşdil, 2016). In addition, it has yet to be discovered how widely IP is experienced in Turkey. Based on our knowledge that it can affect women's lives, in particular, negatively (Clance & O'Toole, 1987), the first aim of this study was to examine the prevalence of IP among women in Turkey.

As stated by Clance and Imes (1978), IP is experienced by high achieving individuals. However, some findings on the relationship between IP and education status and SES have indicated that it is not always necessary to be in a "successful status" to experience these feelings. On the other hand, based on the literature revealing the relationships between the IP and "success", it was decided to approach "success" as a term in the broadest sense and select a population with a high probability of encountering tasks that require a level of success to accomplish. It is also known that IP studies in Western societies were mostly conducted with undergraduate students or working adults (see Bravata et al., 2020). Therefore, being an employee or an undergraduate/graduate student was considered as "success" in this study, because holding a job or pursuing undergraduate/postgraduate education requires successfully passing specific exams or interviews by being chosen over many competitors. In addition, students and employees are more likely to encounter

tasks that require a level of success such as meeting strict deadlines, passing exams, etc. The inclusion of both employees and students in the study was related to the view that IP should be investigated in a sample with a high age range.

In addition, based on the finding that feelings of fraud increase in a competitive environment (Canning et al., 2019), it was aimed to explore the prevalence of IP among women working or continuing their undergraduate/graduate education in one of Turkey's four metropolitan cities (Ankara, Bursa, Istanbul, and Izmir), where competition is expected to be relatively high.

*Research Question 1. What is the prevalence of IP among women in Turkey's four metropolitan cities (Ankara, Bursa, Istanbul, and Izmir)?*

The second aim of the current study was to examine the relationship of IP with demographic characteristics (age, duration of occupation, marital status, educational status, SES, being an employee/student, sector of employment, and being an undergraduate/graduate student) across a broad age range sample to create a risk profile for women. Due to inconsistent findings in the literature, the relationships between IP and demographic characteristics were explored.

*Research Question 2. What are the demographic risk factors of IP?*

Finally, one reason for the inconsistent findings on the relationship between IP and demographic characteristics in the literature was thought to be related to the possible relationship between age and IP. For this reason, it was thought that it might be necessary to examine the relationships between the above-mentioned demographic characteristics and IP by controlling for age.

*Research Question 3. What demographics are IP associated with when controlling for age?*

## **METHODS**

### **Sample**

A total of 677 women who work or are continuing their undergraduate/graduate education in one of the four metropolitan cities of Turkey participated in the research. The age of the participants ranged from 18 to 65 years ( $M_{\text{age}} = 31.36$ ,  $SD = 9.67$ ), of which 171 (25.26%) were students, 356 (52.58%) were employees, and 150 (22.16%) were both students and employees. Also, the educational status of participants was examined. Three participants (0.44%) had secondary school degrees, and 169 (24.96%) had high school degrees. There were 350 respondents (51.70%) with bachelor's degrees, and 116 (17.14%) with master's degrees, and 39 (5.76%) with doctoral degrees. Of the students ( $n = 321$ ) in the sample, 182 (56.70%) were undergraduate students. In addition, 82 (25.55%) were continuing their master's education, and 57 (17.75%)

**Table 1. Mean of Age and of Duration in Occupation, and Age Distribution According to Their Categorical Demographics of the Sample**

Variables	Frequency	Percentage	M	SD	Range
Age			31.36	9.67	18-65
Metropolis lived in					
<i>Bursa</i>	350	51.70%	33.00	10.41	47.00
<i>İstanbul</i>	204	30.13%	29.88	8.39	41.00
<i>Ankara</i>	72	10.64%	29.56	8.30	37.00
<i>İzmir</i>	51	7.53%	28.59	9.20	42.00
Marital Status					
<i>Single</i>	427	63.07%	27.92	8.56	45.00
<i>Married</i>	250	36.93%	37.24	8.58	43.00
Education Status <sup>a</sup>					
<i>High school or below</i>	172	25.41%	23.95	8.16	45.00
<i>Bachelor's degree</i>	350	51.70%	33.34	9.10	45.00
<i>Postgraduate (Master's and doctoral degrees)</i>	155	22.90%	35.11	8.02	38.00
Socio-economic status <sup>b</sup>					
<i>Low (the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> steps)</i>	175	25.85%	30.29	9.35	47.00
<i>Middle (the 4<sup>th</sup> steps)</i>	285	42.10%	30.58	9.28	39.00
<i>High (the 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> steps)</i>	217	32.05%	33.25	10.18	45.00
Working Status					
<i>Student</i>	171	25.26%	22.36	3.72	25.00
<i>Employee</i>	356	52.58%	36.01	9.33	43.00
<i>Student with job</i>	150	22.16%	30.59	7.49	45.00
University or graduate student <sup>c, d</sup>					
<i>Undergraduate</i>	182	56.70%	24.77	8.27	47.00
<i>Graduate (Masters' and doctoral degrees)</i>	139	43.30%	28.09	4.56	22.00
Studying at a state or private university <sup>e</sup>					
<i>State university</i>	243	75.70%	25.09	5.41	29.00
<i>Private university</i>	49	15.27%	24.80	5.68	26.00
<i>Online or open education</i>	29	9.03%	37.90	10.54	44.00
Sector of employment <sup>f</sup>					
<i>Public sector</i>	232	45.85%	36.46	8.72	40.00
<i>Private sector</i>	240	47.43%	31.68	7.94	39.00
<i>Other</i>	34	6.72%	39.09	13.66	45.00
Duration of occupation <sup>g</sup>			10.16	8.78	15 days-45 years

**Note.**  $N = 677$ . <sup>a</sup> For the categories to be as similar as possible regarding n, the five categories of education status were recorded into three categories as “High school or below” (including secondary school and high school degrees), “Bachelor's degree” (Bachelor's degree), and “Postgraduate” (Master's and doctoral degrees). <sup>b</sup> For the categories to be as similar as possible regarding n, the seven categories of socio-economic status were recoded into three categories as low (the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> steps), middle (the 4<sup>th</sup> step), and high (the 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> steps). <sup>c</sup> For the categories to be as similar as possible regarding n, participants who were students were divided into 2 categories: “Undergraduate” and “Graduate” (Masters' and doctoral degrees). <sup>d</sup>  $n = 321$ . <sup>e</sup>  $n = 321$ . <sup>f</sup>  $n = 506$ . <sup>g</sup> Because three working participants responded to duration of occupation invalidly, for  $n = 503$ .

were continuing their doctorate.

Respondents were asked to imagine the socio-economic structure as a ladder with steps from 1 (the lowest SES) to 7 (the highest SES) and to report on which step they perceive themselves to be on this ladder. While 13 participants (1.92%) stated that they were on the first step, 4 participants (0.59%) were on the seventh step. In addition, 24 of the participants (3.55%) reported they were on the second step, 138 (20.38%) on the third step, 285 (42.10%) on the fourth step, 187 (27.62%) on the fifth step and 26 (3.84%) on the sixth step.

The occupations of the working participants ( $n = 506$ ) were quite diverse. Some of these professions were: academic, lawyer, doctor, dentist, psychologist, banker, engineer, architect, teacher, policeman, editor,

trainer, photographer, musician, writer, actor, reporter, librarian, sales consultant, barista, call center worker, and hostess. Similarly, the departments of the participants who were students ( $n = 321$ ) were also quite diverse, including law, business, philosophy, psychology, art history, engineering, architecture, nutrition and dietetics, child development, dentistry, physical therapy and rehabilitation, medicine, molecular biology and genetics, teaching, coaching, and veterinary. Details of the demographic characteristics of the sample can be seen in Table 1.

#### Data Collection Tools

**Clance Impostor Phenomenon Scale (CIPS)** CIPS, developed by Clance (1985), consists of 20 items

(sample item: "I avoid evaluations if possible and have a dread of others evaluating me.") and is a 5-point Likert-type scale (1 = Not at all true; 5 = Very true). As the mean score from the scale increases, IP level increases. CIPS has three subscales: "fake," "luck," and "discount" (Chrisman et al., 1995). It has been reported that the reliability coefficient of the scale varies between .85 and .96 (Chrisman et al., 1995). Özdemir and Kuşdil (2016) adapted CIPS into Turkish. The Turkish version of the scale was found to have a one-dimensional structure. Cronbach alpha of the Turkish scale was .84 and .86; test-retest reliability was .81 (Özdemir & Kuşdil, 2016).

The current study examined the scale's construct validity with Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). EFA findings showed that the rate of variance explained by a one-dimensional structure was 38.28%. However, item 2 ("I can give the impression that I'm more competent than I really am.") and item 19 ("If I'm going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact.") were excluded from the analysis due to their low factor loadings ( $l = .04$  and  $l = .14$ , respectively). The variance explained for the CIPS-18, including 18 items, was found to be 42.43%. The factor loads of the items varied between .40 and .80.

The CFA findings of the CIPS-18 indicated poor fit ( $\chi^2 = 666.891$ ,  $df = 135$ ,  $p < .001$ ,  $\chi^2/df = 4.940$ ,  $GFI = .890$ ,  $CFI = .897$ ,  $RMSEA = .076$ ,  $SRMR = .049$ ). Based on the modification indices, five covariances were added between the error terms of some items (1-13, 5-11, 14-15, 9-10, and 14-8). At the end of this process, it was determined that the model fit was improved ( $\chi^2 = 452.756$ ,  $df = 130$ ,  $p < .001$ ,  $\chi^2/df = 3.483$ ,  $GFI = .927$ ,  $CFI = .937$ ,  $RMSEA = .061$ ,  $SRMR = .042$ ). For this study, Cronbach's alphas were found to be .92.

**Demographic Information Form** The Demographic Information Form was used to reveal the demographic characteristics of the participants. The form included questions such as age, marital status, place of residence, education, SES, working status, duration of occupation, job, university, and department.

## Procedure

The ethical approval for the research was obtained from the Social and Human Sciences Research and Publication Ethics Committee at Bursa Uludağ University (Protocol no: 86162157-302.99/8253; Date: 09/28/2018). The data were collected using online survey software (SurveyMonkey). The snowball sampling technique was used for data collection. The data

collection process was started by sending the survey link to the individuals who met the research criteria (1. to be over 18 years old, 2. to be a woman, and 3. being an undergraduate/graduate student or working in one of the four major cities) in the social circles of the researcher(s). Afterward, individuals participating in the study were asked to share the survey link with their acquaintances who met the criteria. Participants approved the Informed Consent Form and then answered the questions in the survey. The average completion time for the questionnaire was 18 minutes. When the targeted sample number was reached, the survey link was canceled.

## Data Analysis

All data analyses were performed using IBM SPSS 23 (IBM Corp., 2015). First of all, the data of 848 participants who completed the questionnaire were cleaned by the following five stages: (a) examining whether the participants met the criteria of the research, (b) control of missing data in the data set, (c) analyzing the frequency of responses to each scale, (d) control of multiple outputs, and (e) examination of the normal distribution of the data.<sup>1</sup> The data of 170 participants who did not meet the research criteria (1. to be over 18 years old, 2. to be a woman, and 3. being an undergraduate/graduate student or working in one of the four major cities) and one participant with the same responses to 85% of three scales were excluded. There was no missing data. Also, no participants had extreme means for 85% of the scales. Skewness and kurtosis values calculated for CIPS were between -2 and +2. This was accepted as an indicator of normal distribution (see George & Mallery, 2010). After the five stages of data cleaning were completed, it was decided to exclude 171 responses from the analysis, and the analyses were carried out with the data of 677 participants.

The construct validity of the CIPS in the study was examined with EFA and CFA. Items with a factor load of less than .30 in the EFA were excluded from the analysis (see, Tabachnick & Fidell, 2013). In CFA, taking into account the sample size, the following cut-off values were selected as indicators of a good fit: for  $\chi^2/df < 3.50$ , for  $GFI > .90$ , for  $CFI > .90$ , for  $RMSEA < .08$ , for  $SRMR < .08$  (see Tabachnick & Fidell, 2013).

Frequency analysis was used to examine the prevalence of IP. The relationship between IP and continuous demographic variables (age and duration of occupation) was examined by Pearson Correlation Analysis and Partial Correlation Analysis. Relationships between IP and categorical demographic variables were examined with a series of one-way ANOVA and ANCOVA. For the categories to be as similar as pos-

<sup>1</sup> The third and fourth steps in the data cleaning process were applied because the more extensive primary research, of which this research was a part, included multiple scales.

**Table 2. Descriptive Statistics and Correlations Coefficients among Impostor Phenomenon, Age, and Duration of Occupation**

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3
1. IP <sup>a</sup>	677	2.40	0.71	1	-.30***	-.30***(-11*)
2. Age	677	31.36	9.67		1	.89***
3. Duration of occupation	503	10.16	8.78			1

**Note.** The partial correlation coefficient is in parentheses. IP: Impostor Phenomenon. <sup>a</sup>The minimum value for IP is 1.00, the maximum value is 4.78, and the range value is 3.78. \*  $p < .05$ . \*\*  $p < .01$  \*\*\*  $p < .001$ .

sible regarding *n*, SES (“low”, “middle”, and “high”) and educational status (“high school or below”, “bachelors’ degree”, and “postgraduate”) were re-coded as three categories (see Table 1). In addition, the data of 34 participants who answered “other” for the employment sector were not included in the relevant analysis. The homogeneity of variances was tested with Levene's Test. When this hypothesis was not supported, the differences between the categories were examined with Welch and Brown-Forsythe tests. A pairwise comparison of the differences between the categories was analyzed using Tamhane's T2 method, one of the multiple comparison techniques.

## RESULTS

### Prevalence of Impostor Phenomenon

The prevalence of IP was examined with three different ways identified in the literature. To use the first way, the scores suggested by Clance (1985) were used by adapting them for the 18-item scale (for rarely IP:  $18 \leq \text{Total score} \leq 36$ ; for moderate IP:  $37 \leq \text{Total score} \leq 54$ ; for frequently IP:  $55 \leq \text{Total score} \leq 72$ ; for intense IP:  $73 \leq \text{Total score} \leq 90$ ). According to the findings of the frequency analysis, 232 (34.27%) of the participants had rare feelings of fraud ( $M = 30.31$ ,  $SD = 4.14$ ) and 323 (47.71%) had moderate ones ( $M = 44.76$ ,  $SD = 5.21$ ). In addition, 102 (15.07%) of the participants were experiencing IP frequently ( $M = 60.75$ ,  $SD = 4.80$ ), and 20 (2.95%) suffered from it intensely ( $M = 77.55$ ,  $SD = 4.30$ ).

To use the second way, the cut-off score suggested by Holmes et al. (1993) was adapted for the 18-item scale (for non-impostors:  $18 \leq \text{Total score} < 56$ ; for impostors:  $56 \leq \text{Total score} \leq 90$ ). According to the frequency analysis results, 563 (83.16%) participants were non-impostors, and 114 (16.84%) were impostors.

To use the third way, while the cut-off score for non-impostors was calculated by subtracting one standard deviation from the CIPS mean (for non-impostors:  $1.00 \leq M \leq 1.69$ ), the cut-off score for impostors was determined by adding one standard deviation to the mean (for impostors:  $3.11 \leq M \leq 5.00$ ). Frequency analysis revealed that 111 (16.40%) of the participants were non-impostors ( $M = 1.48$ ,  $SD = 0.16$ ) and 100 (14.77%) were impostors ( $M = 3.62$ ,  $SD = 0.42$ ).

### Relationships between the Impostor Phenomenon and Demographic Characteristics

The relationship of IP with age and duration of occupation was analyzed with Pearson Correlation Analysis (see Table 2). Findings revealed negative correlations between IP and age ( $r = -.30$ ,  $p < .001$ ) and duration of occupation ( $r = -.30$ ,  $p < .001$ ). In other words, women who are relatively young and inexperienced are more likely to have feelings of fraud than those who are older and more experienced. However, as there was a high positive correlation between age and duration of occupation ( $r = .89$ ,  $p < .001$ ), age was controlled by Partial Correlation Analysis, and the relationship between IP and duration of occupation was examined. Findings showed that the relationship between IP and duration of occupation was still negative even when age was controlled for ( $r = -.11$ ,  $p = .01$ ). This finding indicates that, regardless of age, women who are relatively new to their profession are more likely to suffer from IP than women who have more professional experience.

The relationships between IP and demographic characteristics, including marital status, education, SES, sector of employment, working status, and undergraduate-graduate studentship were examined with a series of one-way ANOVA tests. The descriptive statistics of the participants related to IP according to these demographic variables are given in Table 3; the findings of the analyses are given in Table 4.

Findings demonstrated that single participants ( $M = 2.51$ ,  $SD = 0.71$ ) had higher IP levels compared to those who were married ( $M = 2.22$ ,  $SD = 0.67$ ,  $F_{(1, 675)} = 27.23$ ,  $\chi^2 = 13.13$ ,  $p < .001$ ). In addition, IP levels also differed according to education status (Welch's  $F_{(2, 338.96)} = 6.69$ ,  $p = .001$ ; Brown-Forsythe's  $F_{(2, 472)} = 6.35$ ,  $p = .002$ ). Multiple pairwise comparisons showed that those with bachelor's degrees ( $M = 2.30$ ,  $SD = 0.70$ ) had lower IP levels than those with high school or below degrees ( $M = 2.50$ ,  $SD = 0.63$ ) and those with postgraduate degrees ( $M = 2.50$ ,  $SD = 0.79$ ). The relationship between SES and IP was also statistically significant (Welch's  $F_{(2, 397.59)} = 4.19$ ,  $p = .02$ ; Brown-Forsythe's  $F_{(2, 580.90)} = 4.44$ ,  $p = .01$ ). Participants with low SES ( $M = 2.54$ ,  $SD = 0.74$ ) had significantly higher IP scores than participants with both middle ( $M = 2.37$ ,  $SD = 0.65$ ) and high ( $M = 2.33$ ,  $SD = 0.74$ ) SES. Participants in the middle and high SES did not differ significantly from each other.



**Table 3. Impostor Phenomenon Scores of the Sample by the Categorical Demographic Characteristics**

Variables	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>	<i>Range</i>
<b>Marital Status</b>						
Single	427	2.51	0.71	1.00	4.67	3.67
Married	250	2.22	0.67	1.00	4.78	3.78
<b>Education Status</b>						
Graduate high school or below	172	2.50	0.63	1.00	4.67	3.67
Bachelor's degree	350	2.31	0.70	1.00	4.67	3.67
Postgraduate	155	2.50	0.79	1.22	4.78	3.56
<b>Socio-economic Status</b>						
Low	175	2.54	0.74	1.11	4.78	3.67
Middle	285	2.37	0.65	1.00	4.67	3.67
High	217	2.33	0.74	1.17	4.67	3.50
<b>Working Status</b>						
Student	171	2.60	0.63	1.00	4.39	3.39
Employee	356	2.22	0.65	1.00	4.67	3.67
Student with job	150	2.60	0.80	1.28	4.78	3.50
<b>Sector of employment<sup>a</sup></b>						
Public sector	232	2.27	0.74	1.11	4.78	3.67
Private sector	240	2.39	0.70	1.00	4.67	3.67
<b>Student: Undergraduate or Graduate<sup>b</sup></b>						
Undergraduate	182	2.50	0.64	1.00	4.67	3.67
Graduate	139	2.71	0.79	1.28	4.78	3.50

**Note.** *N* = 677. For the categories to be as similar as possible regarding *n*, the seven categories of socio-economic status were recoded into three categories as low (the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> steps), middle (the 4<sup>th</sup> step), and high (the 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> steps). <sup>a</sup> *n* = 472, <sup>b</sup> *n* = 321.

IP scores also differed according to working status (*Welch's*  $F_{(2, 319.49)} = 26.11, p < .001$ ; *Brown-Forsythe's*  $F_{(2, 432.08)} = 23.88, p = .001$ ). The findings showed that students without jobs ( $M = 2.60, SD = 0.63$ ) and students with jobs ( $M = 2.60, SD = 0.80$ ) had significantly higher IP scores than participants with jobs who were not students ( $M = 2.60, SD = 0.80$ ). On the other hand, the IP scores of the participants did not differ from each other according to the sector of employment ( $F_{(1, 470)} = 3.35, \chi^2 = 1.74, p = .07$ ). Finally, it was examined whether IP levels differed according to being an undergraduate or graduate student. Findings showed that graduate students ( $M = 2.71, SD = 0.79$ ) had higher IP scores compared to undergraduate students ( $M = 2.50, SD = 0.64, Welch's F_{(1, 261.78)} = 6.17, p = .014$ ).

In summary, the findings indicated that IP might differ according to age, duration of occupation, marital status, educational status, SES, working status, and being an undergraduate/graduate student. The sector of employment, on the other hand, was not associated with feelings of fraud. However, considering the moderate correlation between IP and age, it is possible that the group differences were due to age differences between the sub-categories of demographic characteristics (For the mean age of the participants by the categorical demographic characteristics, see Table 1).

The age variable was controlled with ANCOVA, and the relationships between categorical demographic variables and IP were reanalyzed (see Table 4). The homogeneity of variances was supported for marital status, SES, and education status. Findings revealed that the relationship between marital status and

IP did not reach significance when age was controlled for ( $F_{(1, 677)} = 3.11, \chi^2 = 0.46, p = .078$ ). On the other hand, IP differed significantly according to educational status ( $F_{(2, 673)} = 7.64, \chi^2 = 3.42, p = .001, \eta^2 = .02$ ). According to pairwise comparisons, participants with postgraduate education were found to have higher IP scores than those who graduated from high school or lower educational institutions and universities. Contrary to previous findings in the current study, those who graduated from high school or lower did not differ from those with undergraduate degrees.

When age was controlled, the relationship between IP and SES was statistically significant ( $F_{(2, 673)} = 3.35, \chi^2 = 1.52, p = .036, \eta^2 = .01$ ). Pairwise comparisons revealed that participants with low SES had higher IP scores than those with middle SES, similar to the results of the previous analysis in which age was not controlled. However, participants with low and high SES did not differ.

Since the assumptions of ANCOVA were not supported, IP's relationships with working status and being an undergraduate/graduate student could not be re-analyzed. Therefore, the relationships between these demographic variables and age were investigated with a series of ANOVA (see Table 4). If the differences between the sub-categories in terms of age and IP were similar, it was inferred that age might have a role in the relationship between IP and the demographic characteristics in question. The findings showed that the age differed according to working status (*Welch's*  $F_{(2, 358.29)} = 312.68, p < .001$ ; *Brown-Forsythe's*  $F_{(2, 498.06)} = 227.16, p < .001$ ). Students ( $M = 22.36, SD = 3.72$ ) were younger than working participants ( $M = 36.01, SD$

**Table 4. Findings of ANOVAs and ANCOVAs**

Demographic Characteristics	n	Primary analyses			Additional analyses			
		df	F	$\eta^2$	df	F	$\eta^2$	
Marital Status	Single	427	1, 675	27.23***	.04	1, 677	3.11	.01
	Married	250						
Education Status	High school or below	172	2, 338.96	6.69** <sup>c</sup>	.02	2, 673	7.64**	.02
	Bachelor's degree	350						
	Postgraduate	155						
SES	Low	175	2, 397.59	4.19* <sup>c</sup>	.01	2, 673	3.35*	.01
	Middle	285						
	High	217						
Working Status	Student	171	2, 319.49	26.11*** <sup>c</sup>	.07	2, 358.29	312.68*** <sup>c</sup>	.34
	Employee	356						
	Student with job	150						
Sector of employment <sup>a</sup>	Public sector	232	1, 470	3.35	.01	-	-	-
	Private sector	240						
Studentship <sup>b</sup>	Undergraduate	182	1, 261.78	6.17* <sup>c</sup>	.02	1, 261.78	6.17* <sup>c</sup>	.05
	Graduate	139						

**Note.** N = 677. Primary analyses are ANOVAs to examine the relationships between demographic characteristics and IP. Additional analyses for marital status, education status, and SES include ANCOVAs investigating the relationship between IP and these demographics, controlling for age. Additional analyses for working status and studentship include ANOVAs examining the relationship between age and these demographics. Since the primary analyses did not yield statistically significant results for the sector of employment, no additional analysis was performed for this demographic feature. <sup>a</sup>n = 472. <sup>b</sup>n = 321. <sup>c</sup>Welch's F values were reported because the assumption of homogeneity of variances was not supported in these analyses. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

= 9.33) and those who were both students and working at the same time ( $M = 30.59$ ,  $SD = 7.49$ ). This finding suggested that the relationship between working status and IP was due to age differences. On the other hand, undergraduate students ( $M = 24.77$ ,  $SD = 8.27$ ) were found to be significantly younger than graduate students ( $M = 28.09$ ,  $SD = 4.56$ , Welch's  $F_{(1, 261.78)} = 6.17$ ,  $p = .014$ ). Therefore, age differences cannot explain the higher IP scores of graduate students.

## DISCUSSION

The current study aimed to examine the prevalence of IP and its demographic risk factors in Turkish women. Due to the link between IP and success, the study's sample was aimed to consist of women with a high probability of encountering tasks that require success. Therefore, one of the research criteria for this study was defined as actively working or pursuing education at a university in one of the four metropolitan cities (Ankara, Bursa, Istanbul, and Izmir) in Turkey. An exploratory study was conducted because the prevalence of IP in Turkey has not yet been investigated, and findings regarding IP's demographic risk factors have been contradictory in the literature.

Prevalence analyses were carried out using three different ways in the literature. According to the classification system proposed by Clance (1985), 47.71% of the participants suffered from IP moderately, 15.07% frequently, and 2.95% intensely. Thus, 65.73% of the participants in the study reported at least moderate feelings of fraud. When the method of Holmes et al. (1993) was used, it was seen that 16.84%

of the participants had feelings of fraud. Finally, the third way in the literature was applied, and 14.77% of the participants were found to be impostors. Even when the most conservative values were taken into account, one-sixth of the participants suffered from IP. Moreover, about 3% of respondents struggled with very intense feelings of fraud. Because the prevalence range for IP in the literature is so wide (see Bravata et al., 2020), comparing these findings with previous studies is difficult. However, it can be argued that the values found are within this range (9% to 82%). On the other hand, the prevalence of IP among women in Turkey has been revealed for the first time. Furthermore, findings demonstrating that approximately 3% of the participants experienced pathological feelings about their authenticity have proven that IP can be an important risk factor for the female population in Turkey. Because these findings have pointed out that despite cultural differences, women in Turkey can also experience intense feelings of fraud, likewise in Western societies.

However, to examine the relationship between IP and culture, it is not sufficient to conduct research in individualistic or collective cultures alone; cross-cultural research is needed. In addition, it is also known that there may be differences between individuals in terms of having collectivist or individualistic tendencies (Markus & Kitayama, 1991). Therefore, within the same culture, examining the relationship between such tendencies and feelings of fraud may also be important. These studies may help understand and prevent these feelings, especially in women, because some cultures, like Turkey, prioritize gender roles (see

Haj-Yahia & Sadan, 2008), which may increase IP levels (Fassl et al., 2020; Patzak et al., 2017). It can be considered that these studies, which may contribute to the elimination of internal barriers such as IP, which is a result and product of gender inequality, are worth the effort.

In the study, the relationship of the phenomenon with demographic characteristics was also investigated. Research findings indicated that younger women had higher IP levels. These findings are consistent with studies in the literature revealing the negative relationship between IP and age (e.g., Barr-Walker et al., 2019; McLean & Avella, 2016). Underlying this relationship may be the change in people's self-perceptions as they mature and progress through different life stages, such as starting a family (McLean & Avella, 2016). In other words, the social roles that people find meaningful may differ with age. This may lead people to build their self-concepts in a more balanced way, with different roles, other than education or career success, and thus experience more balanced emotions. In addition, McLean and Avella (2016) suggested that, with age, the importance given to the completion of a task rather than personal achievement may increase, which may reduce feelings of fraud.

Another factor is that social hierarchies often involve age, as well as gender (see Sidanius & Pratto, 1999). Societies frequently privilege adults and middle-aged people over children and young adults. Thus, when individuals are young, they are lower in the social hierarchy; however, they gain more social importance as they get older. In light of this perspective, the findings on the relationship between age and IP can be considered a result of the internalization of not only gender inequality but also age-based inequality in young women.

The findings revealed a negative relationship between IP and duration of occupation. In other words, it was determined that feelings of fraud increased as the duration of occupation decreased. This finding is consistent with Clance's (1985) clinical observations and results of studies that found a relationship between occupational duration and IP (e.g., Barr-Walker et al., 2019; Clark et al., 2022; Kumar et al., 2021). At the same time, the findings showed that the duration of occupation was correlated with age. Predictably, those with little professional experience were relatively young. On the other hand, it was found that the negative relationship between the duration of occupation and IP continued even when age was kept constant. This finding is important, as it shows that work experience reduces the risk of IP, regardless of age. Increasing practices that will enable young women to gain work experience during their education might make them more resistant to IP when they start their careers.

Although the initial findings showed that single participants had higher IP scores than married

participants, it was understood that there was no correlational relationship between marital status and IP when age was controlled for. This finding is consistent with studies showing no significant relationship between marital status and feelings of fraud (e.g., Kimball et al., 2021; Sullivan & Ryba, 2020). Considering that only marriages with high marital quality positively affect the psychological health of couples (Holt-Lunstad et al., 2008), it is reasonable that marital status is not directly related to IP. On the other hand, since healthy romantic relationships positively affect couples' psychological health by affecting their self-concept (McIntyre et al., 2022) and providing social support (Hansard, 2022), in order to reveal the relationship between relationship status and IP, it might be important to determine whether single women in the study were in a romantic relationship or not.

The current research also investigated the relationship of IP with education status (the last school graduated from), working status (employee, student, both working and student), and being an undergraduate or graduate student. Initial analyses showed that the participants who have undergraduate degrees had lower IP levels than the other two groups. However, most of the high school graduates in the research sample were university students, so they were relatively young. Therefore, it was thought that this finding might have arisen from the age differences between the groups. When age was controlled for, women with postgraduate degrees had higher level of feelings of fraud than those who graduated from a high school (or below) or a university. In addition, the findings indicated that students' (undergraduate and graduate) IP scores were significantly higher than working participants. Since the employees were statistically older than the students, there is a possibility that this result may also be due to age differences. In addition, it was detected that graduate students experienced more intense feelings of fraud compared to undergraduate students. These findings are consistent with the results that graduate students had a much higher risk of IP than the general population (Pervez et al., 2021). In addition, the current study's findings about education and working statuses together can be used to support the mental health literature showing that academia might negatively affect psychological well-being due to competition, pressure for success, and harmful work-life balance (Lau & Pretorius, 2019). On the other hand, this literature includes studies showing that high education level buffers against psychological health problems such as depression (e.g., Freeman et al., 2016; Lorant et al., 2003). Therefore, it may be thought that IP also has aspects that differ from other structures related to psychological health.

The research also demonstrated that SES was associated with IP. Results showed that women with low SES had higher feelings of fraud than others. Even when age was controlled for, participants with low

SES had higher IP scores than those with middle ones. While this finding is inconsistent with the research showing that IP would be prevalent regardless of SES (Mascarenhas et al., 2019), it supports the results indicating that low SES predicts an increase in IP (MacInnis et al., 2019). It also supports research showing that low SES negatively affects mental health (Freeman et al., 2016; Lorant et al., 2003; Muntaner et al., 2004; Silva et al., 2016). It has been suggested that the relationship between low SES and mental health is due to the fact that individuals with low SES are exposed to more stressful events and do not have sufficient personal resources to cope with this stress (Lorant et al., 2003). Individuals with lower SES may have higher levels of IP as they have more responsibilities and, therefore, more stress (Ahmed et al., 2020). Furthermore, processes related to disadvantaged group identities may also play a role in this relationship. High levels of education and vocational careers might be considered opportunities for upward social mobility for individuals with low SES (Jetten et al., 2008). However, these "successful positions" in which low socio-economic groups are relatively underrepresented can cause psychological barriers for individuals coming from low SES backgrounds, such as emotional stress, difficulty adapting to a new identity, and being the target of negative stereotypes (Jury et al., 2017). This, in turn, may lead them to experience greater feelings of fraud. On the other hand, participants' IP scores in the high socio-economic group were not different from those with low and middle SES when age was controlled for. Some participants with high SES may have moved up to this status through their achievements and upward social mobility. It can be postulated that being in a high socio-economic group may have triggered feelings of fraud for some of these participants.

Finally, the study examined the relationship between IP and the sector of employment. The findings showed that IP levels of employees in the private and public sectors were similar. This finding supports the findings of the study by Haar and de Jong (2022). However, in the present study, it should be considered that the professions of the participants working in the private and public sectors were not always equivalent to one another. Future research may use a sample including individuals with similar occupations in different sectors to test the relationship between IP and sector of employment.

With this study, it has been revealed that IP may be a serious risk for women in Turkey, similar to Western cultures. The research has provided findings that may improve our understanding of IP's demographic risk factors. Therefore, this research can be considered as one of the few attempts to understand IP in Turkey. However, there are some limitations of the study. First of all, the data were cross-sectional, so the findings did not reveal cause-effect relationships. In addition, data were collected only from four metropolises in Turkey,

and the number of participants was not equally distributed among these cities. Also, only women studying or working were surveyed. Thus, it is not easy to generalize the findings to all women in Turkey. Another limitation of the study is related to the age distribution. For the purposes of the research, the relationship of IP with demographic characteristics across a broad age range sample was examined. When the sample characteristics were concerned, it was revealed that the age of the participants ranged from 18 to 65. When the statistical data are examined, it is seen that most of those who start university education in Turkey are between the ages of 18-22 (Council of Higher Education, 2021). In addition, the retirement age for women in Turkey is 58. In line with this information, it can be considered that the sample's age range is appropriate in terms of the representativeness of the population. However, the average age of the participants was 31.36 ( $SD = 9.67$ ). According to the data from the Turkish Statistical Institute (2021) the median age of the female population distribution in Turkey is 33.8. In addition, it is noteworthy that the median ages of women in the four metropolitan cities where the research was conducted are higher than the average age of the research sample (35.5 for Ankara, 35.8 for Bursa, 34.0 for Istanbul, and 38.6 for Izmir). Moreover, when the age distribution of the sample was examined in detail, it was understood that the majority of the sample consisted of participants in their 20s (49.04%) and 30s (27.18%). Therefore, the age distribution of the sample limits the generalizability of the findings obtained from the study. In addition, only the relationship of demographic variables with IP was examined in the study. Considering the findings showing the importance of determining environmental risk factors in mental health research (e.g., Kim & Kim, 2017), this aspect of the study can also be considered a limitation.

## Conclusion

Identifying and treating IP, especially in women who are the target of gender inequality, is vital. This study provided findings indicating that women in Turkey may experience feelings of fraud even at a level that may be pathological. It also revealed the relationship of IP with age, professional experience, education, and SES. These findings can contribute to clinical practices and developing effective preventive intervention programs. Considering the prevalence and negative consequences, more research on IP in Turkey is needed.

## DECLARATIONS

**Compliance with Ethical Standards** Ethical approval for this study was obtained from the Social and Human Sciences Research and Publication Ethics Committee at Bursa Uludağ University (Protocol no: 86162157-302.99/8253; Date: 09/28/2018).

**Conflict of Interest** Gamze Özdemir Planalı declares that she has no conflict of interest.

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