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RESEARCH ARTICLE

Comparative assessment of demographic and clinical characteristics among applicants for firearm possession and carrying licenses: A community hospital sample from Turkiye

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ABSTRACT

Objective: This study aimed to compare individuals applying to the health board for firearm possession and carrying licenses in terms of various sociodemographic and clinical parameters and to examine whether effective symptom profiling could be achieved in this specific population using self-report rating scales.

Method: The study included 170 consecutive first-time applicants (155 men and 15 women) aged 21–68 years. Applicants for firearm possession and carrying licenses were divided into two groups and underwent a detailed psychiatric interview, including psychiatric history and mental status examination. Past medical records were reviewed through the national "e-Nabız" health database. Eligibility was restricted to individuals without a documented psychiatric diagnosis within the previous five years or psychotropic medication use within the previous six months. Participants also completed a case report form and a screening battery consisting of the Beck Depression Inventory, Beck Anxiety Inventory, State–Trait Anger Expression Inventory, and Barratt Impulsiveness Scale to evaluate symptom profiles.

Results: The difference in gender distribution between the two groups was statistically significant (p=0.029). A statistically significant difference was also found between the possession and carrying license groups regarding reasons for firearm acquisition (p<0.001). The most common reason in the possession group was inheritance or transfer from a relative or friend (31.8%), whereas in the carrying group the most common reason was employment in occupations perceived to endanger personal safety (32.9%). In both groups, no participant scored above the established cut-off values for depression, anxiety, impulsivity, or trait anger.

Conclusion: The findings indicate clear differences in firearm acquisition motives between applicants for possession and carrying licenses. In high-stakes licensing contexts, applicants may present socially acceptable justifications for firearm acquisition, thereby limiting the interpretive value of self-reported statements. Self-report screening instruments alone may not reliably identify clinically meaningful symptom profiles in this legally and clinically sensitive setting. Conclusions based solely on applicant declarations may therefore lack sufficient scientific validity, and corroboration through official documentation may assist clinicians in contextualizing evaluations.

Keywords: Firearm carrying license, firearm possession license, health board report, homicide, suicide

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INTRODUCTION

In Turkiye, firearm possession and carrying licenses are regulated primarily by Law No. 6136, Law No. 2521, and their associated implementation regulations. Firearm acquisition is considered a conditional privilege rather than an individual right and therefore requires fulfillment of specific criteria (1-3). Carrying licenses, which inherently include possession rights, are restricted to certain professional groups (4) or individuals considered to face serious threats to personal safety (5). By contrast, possession licenses may be obtained by citizens older than 21 years of age who have no criminal record and who receive a medical board report confirming eligibility. These licenses permit firearms to be stored at home or in the workplace but do not authorize carrying them in public. Both license types must be renewed every five years (1-3). A medical board report confirming eligibility is mandatory, and psychiatric evaluation constitutes a central component of the assessment process. However, the relevant legislation defines psychiatric disqualification in broad and non-operational terms, such as the presence of "psychological, neurological, or mental disorders," without specifying standardized diagnostic thresholds, structured assessment tools, or evidence-based risk indicators (1-3). Consequently, eligibility decisions rely heavily on individual clinical judgment rather than validated assessment frameworks.

In contrast, firearm access in the United States is shaped by a constitutional framework in which the Second Amendment recognizes an individual right to keep and bear arms, and no general federal licensing requirement exists for private individuals exercising this right (6). Regulatory oversight primarily targets manufacturers, importers, dealers, and collectors under the Gun Control Act of 1968, which defines prohibited categories—including unlawful substance users and individuals adjudicated as mentally defective or committed to a mental institution—through legal and adjudicative mechanisms rather than routine psychiatric certification (7, 8). Accordingly, psychiatrists do not function as routine gatekeepers in firearm acquisition, and their involvement is generally limited to court-based determinations or mandated reporting pathways, with relevant information transmitted to state systems and the National Instant Criminal Background Check System when applicable (9-12). Even in states that historically required carrying permits, these systems generally did not depend on prospective psychiatric evaluations, and subsequent Supreme Court decisions have further limited discretionary permitting practices (6).

Across the United Kingdom and the European Union, firearm acquisition is similarly treated as a conditional privilege regulated through administrative authorization rather than routine psychiatric certification (13). In the United Kingdom, licensing decisions are made by local chief officers of police based on "good reason" and public safety considerations and include background investigations, interviews, and secure storage inspections. Mental illness is not considered an automatic disqualifier, and prior detention under mental health legislation does not constitute a permanent prohibition, although it may be considered in evaluating current fitness and risk (14). At the European Union level, Directive (EU) 2021/555 establishes harmonized standards for firearm categorization, authorization, traceability, and secure storage while leaving carrying regulations and additional safeguards to individual member states. Notably, the directive does not mandate psychiatric assessment or explicitly refer to psychiatrist involvement as a supranational requirement (15).

This uniquely structured Turkish framework places psychiatrists in a central gatekeeping role with substantial legal and public safety implications while providing limited guidance regarding how risk should be evaluated, particularly among applicants without a documented psychiatric history. In routine practice, eligibility decisions therefore rely largely on self-report, clinical impression, and available health records, despite the absence of assessment tools specifically validated for firearm licensing contexts. Given the large number of applications processed annually in Turkiye (16), this represents a significant yet underexamined area of routine psychiatric practice.

Firearm-related violence remains a major public health concern worldwide, encompassing suicide, homicide, and accidental injury (17-20), and has been associated with multiple clinical, social, and demographic factors (21-24). Although most firearm-related violence involves unlicensed weapons, licensed firearms are also implicated in suicide and homicide in Turkiye and elsewhere, underscoring the importance of accurate psychiatric assessment during the licensing process (25-29). Nevertheless, no Turkish study has yet proposed evidence-based methods for objectively identifying psychiatric risk profiles in this population, likely in part because self-report instruments are particularly vulnerable to dissimulation and socially desirable responding in evaluations associated with legal benefit (30-32). Against this background, the present study aimed to compare applicants for firearm possession and carrying

licenses in terms of sociodemographic characteristics, clinical markers, and firearm acquisition motives and to examine whether self-report screening instruments can identify clinically meaningful symptom profiles in this legally and clinically sensitive context.

METHODS

Study Design and Setting

Individuals who met the inclusion criteria and consecutively presented to the outpatient psychiatry clinic of Istinye State Hospital between May 2021 and December 2022 for medical board assessment were included in the study. Applicants seeking a medical board report for the first-time acquisition of either a firearm carrying license or a firearm possession license were eligible for inclusion. The study was approved by the Istanbul Medipol University Non-Interventional Clinical Research Ethics Committee on May 20, 2021 (approval number: 560).

Participants and Eligibility Criteria

The study included literate male and female participants who were able to complete the assessment instruments used in the study. To determine the required sample size for the independent samples t-test, an a priori power analysis was conducted using G*Power version 3.1. Assuming a large effect size ($f=0.40$), a significance level of $p<0.05$ ($\alpha=0.05$), and a statistical power of 80% ($1-\beta=0.80$), the analysis indicated that a total sample of 156 participants would be sufficient, with 78 participants required in each group. To account for potential attrition or incomplete data, the target sample size was increased to 170 participants. All participants received verbal and written information regarding the study and provided written informed consent prior to participation. The study specifically targeted first-time firearm license applicants. Individuals applying for license renewal or those who had previously obtained a firearm license and were applying for an additional license for a newly purchased or intended firearm were excluded.

Psychiatric Interview Procedure

All psychiatric evaluations were conducted as part of the standard medical board procedure for firearm license applications. Two board-certified psychiatrists participated in the assessment process. Evaluations were performed using a semi-structured clinical interview format consistent with routine psychiatric practice. This approach allowed for a natural reciprocal interview flow while ensuring systematic assessment of relevant domains, including psychiatric history, medical history, substance use history, forensic history, and comprehensive mental status examination. No fully structured diagnostic instrument was used because the evaluations were conducted within the framework of routine administrative assessments rather than research-oriented diagnostic interviews. Inter-rater reliability was not formally assessed. However, both psychiatrists completed their residency training at the same institution and adhered to the same institutional clinical evaluation standards throughout their training.

Recruitment and Procedure

Individuals who had been prescribed psychotropic medication within the previous six months, had a history of regular psychiatric follow-up, had received a disability report within the previous five years due to a psychiatric diagnosis other than schizophrenia spectrum or bipolar disorder spectrum disorders, or had been prescribed psychotropic medication at any point in their lives due to a schizophrenia spectrum or bipolar disorder spectrum diagnosis were individually interviewed prior to application following verification of e-Nabız records. These individuals were informed about the relevant legislation and the general evaluation framework. Following the preliminary interview, none proceeded with the application process, assuming that their request would be rejected under the applicable regulations; therefore, they were not included in the study. Consequently, all individuals included in the study sample had no documented psychiatric diagnosis or treatment history recorded in the official nationwide personal health database (e-Nabız) within the previous five years.

Because the relevant legislation contains vague definitions, the six-month and five-year exclusion periods described above were determined according to the clinical judgment and experience of the evaluating psychiatrists. The Regulation on the Implementation of Law No. 6136 on Firearms, Knives, and Other Instruments does not provide explicit temporal criteria, thereby increasing the importance of clinician discretion in establishing a practical evaluative framework.

During the study period, 178 individuals consecutively presented for firearm license medical board evaluation. All applicants were screened for eligibility. Six individuals were excluded following the preliminary psychiatric interview because of documented psychiatric history or recent psychotropic medication use according to the study exclusion criteria. No applicants were excluded because of illiteracy, and

no eligible individuals declined participation. The remaining 170 applicants met the psychiatric eligibility criteria and were included in the study. Accordingly, all participants included in the analysis were considered psychiatrically eligible for firearm licensure.

Psychometric Instruments

Participants completed a detailed case report form including demographic information and various clinical variables. Data were reviewed for completeness prior to analysis. Psychometric scale data and primary demographic variables were complete for all included participants. Occupational information, however, contained substantial missing and non-standardized responses and was therefore excluded from statistical analyses through listwise deletion for that variable. All remaining analyses were conducted using complete-case data. Both groups—applicants for firearm possession licenses and applicants for firearm carrying licenses—completed a screening battery consisting of self-administered clinical assessment scales. Collected data were compared with respect to demographic variables, clinical characteristics, and screening battery results.

Scales Included in the Screening Battery Beck Depression Inventory (BDI)

The Beck Depression Inventory was developed by Beck et al. (1961) to assess the severity of depressive symptoms. It consists of 21 items, each scored from 0 to 3. The Turkish validity and reliability study was conducted by Hisli (1988) (33, 34).

Beck Anxiety Inventory (BAI)

The Beck Anxiety Inventory was developed by Beck et al. (1988) to assess anxiety severity. It consists of 21 items, each scored from 0 to 3. The Turkish validity and reliability study was conducted by Ulusoy et al. (1998) (35, 36).

State–Trait Anger Expression Inventory

The State–Trait Anger Expression Inventory was developed by Spielberger et al. (1983) to assess anger levels and anger expression styles. The scale includes four subscales: Trait Anger, Anger-In, Anger-Out, and Anger Control. The Turkish validity and reliability study was conducted by Özer (1994) (37, 38).

Barratt Impulsiveness Scale–11 Short Form (BIS-11)

The Barratt Impulsiveness Scale was originally developed by Barratt (1959) to assess impulsivity and was later revised by Patton, Stanford, and Barratt (1995). The Turkish validity and reliability study was conducted by Güleç et al. (2008) (39-41).

Statistical Analysis

Descriptive statistical measures, including mean, standard deviation, percentage, minimum, and maximum values, were used to evaluate the demographic and clinical characteristics of applicants for firearm carrying and possession licenses. For both groups, the normality assumptions of the Beck Depression Inventory, Beck Anxiety Inventory, State–Trait Anger Expression Inventory subscales (Trait Anger, Anger Control, Anger-Out, and Anger-In), and Barratt Impulsiveness Scale scores were evaluated by examining whether skewness and kurtosis values fell within the range of ±2 (42). Formal normality tests such as the Shapiro–Wilk or Kolmogorov–Smirnov tests were not performed because skewness and kurtosis criteria are considered acceptable indicators of distributional normality in samples of this size.

Because the Beck Depression Inventory, Beck Anxiety Inventory, Anger Control subscale, and Barratt Impulsiveness Scale scores did not meet normality assumptions, group comparisons for these variables were performed using the Mann–Whitney U test. Since Trait Anger, Anger-Out, and Anger-In subscale scores demonstrated normal distribution, comparisons between groups for these variables were conducted using the independent samples t-test.

Chi-square analysis and Fisher's exact test (when expected cell frequencies were below 5) were used to compare categorical variables between groups. Because the psychological measures represented conceptually related constructs and the analyses were exploratory in nature, no correction for multiple comparisons was applied. Statistical significance was defined as $p<0.05$ for all analyses. Data analyses were performed using JAMOVI version 2.6.45.0.

RESULTS

The demographic and clinical characteristics of the sample according to license type are presented in Table 1. The difference in gender distribution between the two groups was statistically significant and demonstrated a small effect size ($p=0.029$, Cramer's $V=0.176$).

Individuals evaluated for both firearm possession and firearm carrying licenses reported no current emotional or psychiatric complaints, no history of suicide attempts, no prior psychiatric hospitalization, and no current illicit substance use. Among applicants for firearm possession licenses, only one individual (1.1%) reported a forensic history, whereas two individuals (2.4%) in the firearm carrying license group

Table 1: Demographic characteristics of applicants for firearm possession and carrying licenses

	Possession		Carrying		p	Effect size
	n	%	n	%		
Gender						
Male	76	86.4	79	96.3	**0.029***	**0.176[a]**
Female	12	13.6	3	3.7		
Marital status						
Married	63	71.6	54	65.9	0.713*	0.076[a]
Single	22	25.0	23	28.0		
Divorced	3	3.4	4	4.9		
Educational level						
No formal education	1	1.1	0	0	0.706*	0.138[a]
Primary school	11	12.5	9	11		
Middle school	13	14.8	8	9.8		
High school	23	26.1	26	31.7		
University degree	34	38.6	30	36.5		
Postgraduate degree	6	6.8	9	11		
Occupational status						
Employed	73	83.0	76	92.7	0.127*	0.156[a]
Unemployed	10	11.4	3	3.7		
Retired	5	5.7	3	3.7		
Living arrangement						
Living with family	83	94.3	69	84.1	0.095*	0.171[a]
Living alone	4	4.5	10	12.2		
Living with a friend or relative	0	0	1	1.2		
Dormitory residence	1	1.1	2	2.4		
Age	**Mean±SD**	**Median**	**Minimum**	**Maximum**		
Possession	35.6±8.87	34.0	21.0	62.0	0.195**	-0.200[b,c]
Carrying	37.4±9.29	26.0	18.0	68.0		

SD: Standard deviation; *: Chi-square test; **: Independent samples t-test; a: Cramer's V; b: Cohen's d; c: H_0: possession ≠ carrying.

reported such a history. Regarding alcohol use, two individuals (2.3%) in the firearm possession group and one individual (1.2%) in the firearm carrying group reported current alcohol consumption.

Reasons for firearm acquisition and the presence of a specific adverse event associated with firearm license applications according to license type are presented in Table 2. Applicants in the possession license group most commonly sought licensure for inheritance or transfer of firearm ownership from a relative or acquaintance, whereas applicants in the carrying license group most frequently cited employment in occupations perceived to pose risks to personal safety. The difference in firearm acquisition motives between the two groups was statistically significant and demonstrated a medium-to-large effect size ($p<0.001$, Cramer's V=0.498) (Table 2, Fig. 1, 2).

Comparisons of mean scores for anxiety, depression, anger control, impulsivity, trait anger, anger-out, and anger-in are presented in Table 3.

In both groups, none of the individuals evaluated for firearm possession or carrying licenses scored 10 or above on the Beck Depression Inventory, 8 or above on the Beck Anxiety Inventory, 20 or above on the Trait Anger subscale, or 30 or above on the Barratt Impulsiveness Scale. Among applicants for firearm possession licenses, only 11.4% scored 23 or below on the Anger Control subscale, 2.3% scored 16 or above on the Anger-Out subscale, and 6.8% scored 16 or above on the Anger-In subscale. Among applicants for firearm carrying licenses, 4.6% scored 23 or below on the Anger Control subscale, 3.7% scored 16 or above on the Anger-Out subscale, and 4.9% scored 16 or above on the Anger-In subscale (Fig. 2).

Table 2: Clinical characteristics of applicants for firearm possession and carrying licenses

	Possession		Carrying		p*	Effect size
	n	%	n	%		
Firearm acquisition motive						
"I have experienced an incident that threatened my personal safety or I am currently receiving threats."	1	1.1	5	6.1	**<0.001**	**0.498[a]**
"I work in an occupation that may place my personal safety at risk."	7	8.0	27	32.9		
"There are occasions when I need to carry or store large amounts of cash on my person or in my office."	17	19.3	26	31.7		
"I am applying for reasons related to curiosity, hobby, target shooting, hunting, or similar activities."	22	25.0	16	19.5		
"I have received or will receive a firearm through transfer or inheritance from a relative."	28	31.8	2	2.4		
Other reasons	13	14.8	6	7.3		
History of a specific incident leading to the firearm license application						
Yes	2	2.2	3	3.6	0.673	0.041[a]
No	86	97.8	79	96.4		

*: Chi-square test; a: Cramer's V.

DISCUSSION

In this study, significant differences were identified between applicants for firearm possession and firearm carrying licenses regarding their stated reasons for firearm acquisition. Inheritance or transfer from a relative or acquaintance was the predominant motive among applicants for firearm possession licenses, whereas employment in occupations perceived to endanger personal safety was the most common motive among applicants for firearm carrying licenses. Previous Turkish studies have generally examined firearm license applicants as a single group (43-49) without distinguishing between license categories. The observed pattern is consistent with the administrative and legal criteria governing eligibility for each type of license. Although the difference in firearm acquisition motives demonstrated a medium effect size, suggesting a more structurally meaningful distinction between possession and carrying license applicants, this difference most likely reflects regulatory framework differences rather than clinically meaningful variation.

The gender distribution of the sample was heavily skewed toward male applicants. This finding appears consistent with evidence suggesting that firearm ownership may be associated with norms related to masculinity, honor, family protection, and self-reliance (50, 51). In cultural settings where emotional restraint and self-control are socially valued masculine traits, applicants may be inclined to emphasize psychological stability while minimizing vulnerability (52). The predominance of male applicants in the present sample further reflects the gendered nature of firearm licensure in this context. A culturally sensitive perspective may therefore facilitate interpretation of both self-report data and clinical impressions.

Contrary to the study hypothesis, none of the participants in either group scored above established cut-off values for depression, anxiety, impulsivity, or trait anger. This uniformly low symptom burden is unlikely to reflect the true absence of subclinical distress or risk-relevant traits and instead may reflect positive self-presentation tendencies inherent to firearm licensing evaluations. Unlike therapeutic settings, in which individuals seek help for subjective distress, applicants undergoing firearm license assessments are motivated to demonstrate psychological fitness and the absence of potentially disqualifying characteristics (30-32).

Previous research has shown that self-report psychiatric scales may substantially underestimate symptom severity in non-therapeutic, high-stakes contexts, particularly when evaluations are linked to legal or administrative outcomes (53, 54). In such settings, impression management—whether conscious or unconscious—may compromise the validity of self-reported data. The present findings are consistent with this literature and suggest that commonly used self-report instruments, when administered in isolation, have limited utility for symptom profiling in firearm licensing contexts.

Importantly, the uniformly low scale scores observed in this study should not be interpreted as evidence that applicants are free from psychiatric risk. Rather, these

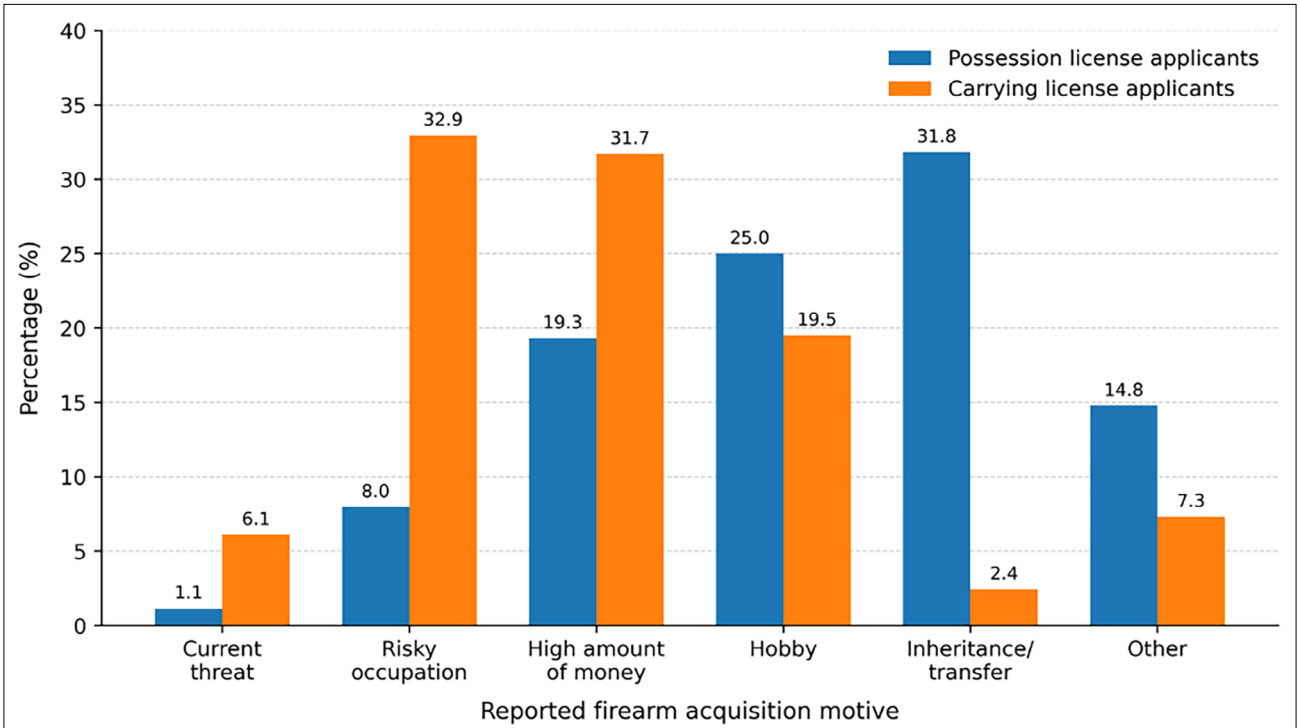

Figure 1. Distribution of reported firearm acquisition motives (%) among applicants for firearm possession and carrying licenses.

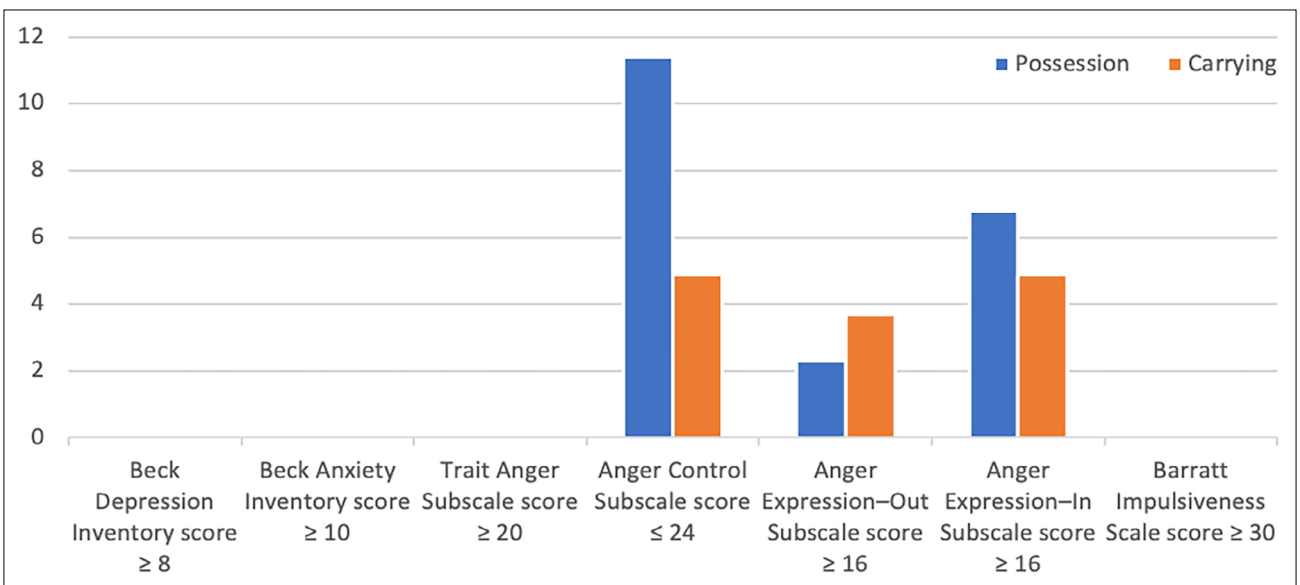

Figure 2. Distribution (%) of applicants for firearm possession and carrying licenses according to screening battery cut-off score status.

findings highlight the structural limitations of self-report measures in evaluations involving secondary gain and underscore the need for more objective, context-appropriate assessment strategies (30-32).

A critical methodological consideration in interpreting these findings is the exclusion of individuals with documented psychiatric diagnoses or recent psychiatric treatment. Although this selection may appear to limit the generalizability of symptom-based findings, it reflects the real-world structure of firearm licensing procedures in Turkiye rather than an unintended sampling bias. Individuals with known psychiatric treatment histories are often either legally ineligible or self-select out of the application process because of the anticipated likelihood of rejection under current regulations.

Table 3: Mean scores on the Beck Depression Inventory, Beck Anxiety Inventory, Barratt Impulsiveness Scale, and the Trait Anger, Anger Control, Anger Expression–Out, and Anger Expression–In subscales among firearm possession and carrying license applicants

	n	Mean	Median	SD	SE	Statistics	df	p	Effect size
Beck depression inventory									
Possession	88	0.659	0.0	1.10	0.118	-1.1806[a] 3464	168	0.601[x]	0.039[a]
Carrying	82	0.902	0.0	1.56	0.172				
Beck anxiety inventory									
Possession	88	0.591	0.0	1.20	0.128	0.8862 3435	168	0.486[x]	0.048[a]
Carrying	82	0.439	0.0	1.02	0.113				
Trait anger subscale									
Possession	88	11.648	11.0	2.06	0.219	0.4071 3578	168	0.684[y]	0.062[b]
Carrying	82	11.524	11.0	1.88	0.208				
Anger Control Subscale									
Possession	88	28.864	31.0	4.63	0.494	-1.4155[a] 3476	168	0.667[x]	0.036[a]
Carrying	82	29.707	31.0	2.87	0.316				
Anger expression-out subscale									
Possession	88	11.182	11.0	2.20	0.235	1.0747 3181	168	0.284[y]	0.164[b]
Carrying	82	10.817	11.0	2.22	0.245				
Anger expression-in subscale									
Possession	88	11.352	11.0	2.66	0.284	-0.2517 3466	168	0.802[y]	-0.038[b,c]
Carrying	82	11.451	11.0	2.45	0.271				
Barratt impulsiveness scale									
Possession	88	17.705	17.0	2.53	0.270	-0.0406 3499	168	0.732[x]	0.030[a]
Carrying	82	17.720	17.0	2.25	0.249				

SD: Standard deviation; SE: Standard error; df: Degrees of freedom; x: Mann–Whitney U test; y: Student's t-test; a: Rank-biserial correlation; b: Cohen's d; c: H_0: possession ≠ carrying.

Consequently, psychiatrists conducting firearm license evaluations are predominantly tasked with assessing individuals without documented psychiatric histories and must rely largely on self-report, clinical impression, and available administrative records (55). From this perspective, the principal clinical challenge in firearm licensing evaluations lies not only in identifying overt psychiatric disorders, but also in assessing potential risk among applicants without documented psychiatric morbidity.

The availability of national electronic health records (e-Nabız) (56) and official criminal record systems may reduce overt dissimulation by enabling cross-verification of applicant declarations. However, such systems do not capture subthreshold symptoms, personality traits, acute stressors, or contextual risk factors and therefore cannot fully compensate for the limitations of self-report instruments and brief clinical interviews.

Within the current Turkish firearm licensing system, psychiatrists occupy a decisive gatekeeping role with significant legal and public safety implications despite the absence of standardized, evidence-based frameworks for assessing risk among applicants without overt psychiatric illness. The present findings suggest that approaches relying primarily on subjective declarations and self-report scales are insufficient for this purpose. If self-report instruments are vulnerable to positive self-presentation in high-stakes administrative contexts, simply increasing the degree of interview structuring may not adequately resolve the underlying validity problem. Structured or semi-structured interview formats primarily improve procedural consistency, whereas deliberate impression management reflects a response-validity issue that may persist regardless of interview format. Similarly, although some personality inventories include defensiveness or validity indices,

the ethical and legal implications of denying firearm licensure solely on the basis of elevated impression management indicators remain unclear, particularly in the absence of validated predictive models linking such findings to adverse outcomes. More intensive approaches, such as performance-based or behavioral assessments, may be impractical, disproportionate, and financially burdensome within routine licensing procedures. At present, the most plausible alternative may involve incorporating formal collateral information, such as structured social circumstance reports prepared by social workers, alongside systematic cross-checking of administrative and forensic databases.

An additional issue warranting consideration is that firearm licensing procedures focus exclusively on the individual applicant, despite evidence that firearms stored in the home may be accessible to other household members and may contribute to domestic violence and lethal outcomes (25, 57, 58). Incorporating broader contextual or household-level considerations, where legally and ethically appropriate, may therefore enhance risk assessment, as is already practiced in other evaluative contexts such as adoption or foster care assessments.

Addressing these limitations will require large-scale retrospective and prospective studies linking firearm licensing data with real-world outcomes such as suicide, homicide, domestic violence, and forensic involvement. Multicenter collaborations integrating health records, judicial data, and forensic findings are essential for developing and validating structured, licensing-specific assessment models. Although actuarial tools such as OxRISK (59) were developed for forensic populations and are not designed specifically for firearm licensing contexts, they nevertheless illustrate the potential value of structured, data-integrated approaches when ethically adapted and rigorously validated.

Limitations

First, the measures of depression, anxiety, anger, and impulsivity used in this study were based on self-report instruments. In evaluative contexts such as firearm license applications, where personal stakes are substantial, participants may engage in positive self-presentation or symptom minimization, potentially resulting in artificially low scores that do not fully reflect underlying clinical status.

Second, the study was conducted at a single state hospital and included a relatively modest sample size (n=170). These factors limit the generalizability of the findings. Future multicenter studies incorporating diverse geographic regions and socioeconomic contexts would improve external validity and permit more robust comparisons across populations.

Third, several behavioral and environmental risk factors relevant to violence risk—including family dynamics, social support, psychosocial stressors, trauma exposure, and conditions of firearm access—were not systematically assessed. The absence of these variables limits the study's ability to contextualize psychological symptom scores within broader risk frameworks.

Fourth, the gender distribution of the sample was heavily skewed toward male applicants (approximately 91%). Although this likely reflects the real-world demographic characteristics of firearm license applicants in Turkiye, the predominance of male participants limits the generalizability of the findings to female applicants. Future studies including larger numbers of female applicants would help clarify whether similar patterns are observed across genders.

Finally, the cross-sectional design precluded longitudinal evaluation of firearm-related behaviors, including patterns of firearm use, the emergence of violent outcomes, or whether hypothesized risks subsequently materialized. Although the Turkish framework reflects a precautionary public safety orientation, whether such proactive psychiatric screening meaningfully enhances public safety, or instead places clinicians in a role with limited predictive capacity, remains an empirical question requiring longitudinal, outcome-based investigation.

Ethical Approval: The Istanbul Medipol University Non-Interventional Clinical Research Ethics Committee granted approval for this study (date: 20.05.2021, number: 560).

Informed Consent: All participants received verbal and written information regarding the study and provided written informed consent prior to participation.

Conflict of Interest: The authors declare that there is no conflict of interest.

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Contribution Categories		Author Initials
Category 1	Concept/Design	I.A., S.S.
	Data acquisition	I.A., S.S.
	Data analysis/Interpretation	I.A.
Category 2	Drafting manuscript	I.A.
	Critical revision of manuscript	S.S.
Category 3	Final approval and accountability	I.A., S.S.
Other	Technical or material support	I.A.
	Supervision	I.A., S.S.

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