

# Video Game Sexism Scale: Turkish Adaptation, Validity, and Reliability Study

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Individuals who enjoy playing online games identify as gamers. Online games attract a diverse audience (Shaw, 2011). However, the perception that gaming is a masculine activity and that young men are the primary gamers persists (Fox & Tang, 2014). As a result, women are frequently marginalized within gaming communities (Kendrick, 2021). This exclusion can lead to negative outcomes for female gamers, including rumination (Fox & Tang, 2016), discouragement (Steiner et al., 2009), and even discontinuation of gaming.

## Current Study

Given the increasing number of online gamers in Türkiye and the growing participation of women in this space, it is important to examine sexism and discrimination in online games within the Turkish context. Accordingly, this research, consisting of a preliminary study and two studies, tests the validity and reliability of the Sexism in Video Games Scale (SVGS) (Fox & Tang, 2014) in the Turkish sample. We assessed the validity of the scale using convergent (i.e., positive correlations with social dominance orientation, gender system justification, masculinity ideology, and femmephobia) and discriminant validity (i.e., no correlation with social desirability), and its reliability using Cronbach's alpha.

## The Preliminary Study: Adapting the Scale to the Turkish Context

We adapted the scale into Turkish by translation and back translation. In the final stage of the adaptation, a bilingual expert compared the back-translated form to the original scale and evaluated the compatibility. The preliminary study was conducted with 24 gamers, and the average clarity score of the items was 4.42 out of 5.

Therefore, we concluded that the items were clear.

## Study One: Exploring the Factor Structure of the Scale

### Method

#### Participants

We collected data from 963 adults who played competitive online multiplayer games and conducted analyses with 580 participants (251 women, 322 men, and seven others). The demographic characteristics of the sample are presented in Table 1.

#### Materials

In addition to demographic information and the SVGS, five other scales were administered to assess convergent and discriminant validity:

**Social Dominance Orientation (SDO).** We used the Turkish version (Akbaş, 2010) of Pratto et al.'s (1994) SDO Scale. We used a 15-item version due to a typographical error.

**Gender System Justification (GSJ).** We used the Turkish version (Ercan, 2009) of Jost and Kay's (2005) GSJ scale.

**Femmephobia (FEM).** We used Hoskin's (2018) version of Hill and Willoughby's (2005) Transphobia and Gendering Scale to measure femmephobia. The scale was adapted to Turkish by Cingöz-Ulu et al. (2016), and the nine items that we used were previously used by Türkoğlu and Sayılan (2023).

**Masculinity Ideology (MI).** We used Türkoğlu and Sakallı's (2024) 22-item scale.

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**Social Desirability (SD).** We used the Turkish version (Akin-Arkan et al., 2021) of the short form (Reynolds, 1982) of the social desirability scale (Crowne & Marlowe, 1960).

### Results

We conducted a series of exploratory factor analyses (EFAs) using Jamovi (2.3.19) to examine the underlying factor structure of SVGS. The Kaiser-Meyer-Olkin value (.93) and Bartlett's test of sphericity ( $\chi^2(120) = 4926, p < .001$ ) indicated that the data were suitable for EFA and that the sample size was adequate (Tabachnick & Fidell, 2013). In the analyses, we used the principal axis factoring method for factor extraction in combination with oblimin rotation (Güngör, 2016). The results indicate that the scale comprised three factors, which accounted for 55% of the total variance, an improvement over the original single-factor structure (43.1% ).

The first factor, "*social*" *gamer* (7 items; factor loadings .40 to .88), reflects perceptions that women seek attention in games or play for social purposes. The second factor, *weak link* (5 items; loadings .40 to .95), includes items with themes of the gaming world being male-oriented. The third factor, *sensitivity* (4 items; loadings .43 to .89), includes items with the themes of women being overly sensitive in gaming contexts.

We examined the convergent and discriminant validity of SVGS. As expected, SVGS had moderate-to-high positive correlations with SDO ( $r = .38, p < .001$ ), GSJ ( $r = .43, p < .001$ ), FEM ( $r = .51, p < .001$ ), and MI ( $r = .58, p < .001$ ), no correlation with SD ( $r = .01, p = .90$ ). Thus, convergent and discriminant validity were assured. Similarly, the findings met our correlation hypotheses for the scale's subfactors (see Table 3). Lastly, the overall scale's internal consistency coefficient is  $\alpha = .91$ , and the reliability coefficients for each factor are .84, .84, and .82, respectively.

### Discussion

Unlike the original scale, the results from EFA support a three-factor structure. The internal consistency coefficient obtained for the scale indicates reliability in the Turkish sample. Both SVGS and the sub-factors correlated significantly and positively with femmephobia, SDO, MI, and GSJ, supporting convergent validity. Conversely, it exhibited no significant relationship with the SD, affirming discriminant validity.

## Study Two: Testing the Factor Structure of the Scale

### Method

#### Participants

We analyzed data from 373 participants (178 women, 189 men, and six others), aged 18 to 60 ( $M = 23, SD = 5.1$ ).

#### Materials

This study used the same measurement tools as the first study, including the full 16-item version of the Social Dominance Scale.

### Results

We conducted a series of confirmatory factor analyses through EQS 6.4 using the maximum likelihood method to test whether the factor structure obtained in EFA fitted the data. Initial model fit for the three-factor structure was poor: Satorra-Bentler  $\chi^2(101) = 249.44$ , CFI = .85, RMSEA = .06, 90% CI [.05, .07]. Following the modification indices, we established covariance relationships between the error variances of items within the same factor that had semantic relationships. As a result, the three-factor structure demonstrated a good fit with the data (Satorra-Bentler  $\chi^2(98) = 170.28, p < .001$ , CFI = .93, RMSEA = .05, % 90 CI [.03, .06]).

The fit indices of our constructed three-factor model significantly improved compared to the single-factor original scale. Furthermore, following the modifications suggested, the fit indices of our model have also considerably differed from the initial three-factor structure ( $\Delta\chi^2(3) = 3.59, p < .001$ ). For the scale's original single-factor structure, however, the model fit indices showed that the model demonstrated a poor fit with the data (Satorra-Bentler  $\chi^2(104) = 418.15$ , CFI = .69, RMSEA = .09, 90% CI [.08, .10]).

Secondly, similar to Study 1, we examined the convergent and discriminant validity of the scale. The SVGS demonstrated the expected strong positive correlations with SDO ( $r = .50, p < .001$ ), GSJ ( $r = .53, p < .001$ ), FEM ( $r = .71, p < .001$ ), and MI ( $r = .68, p < .001$ ), and no correlation with SD ( $r = .06, p = .233$ ). The correlations among the subfactors were consistent with our hypotheses (see Table 6). The convergent and discriminant validity were assured. Lastly, the overall scale's internal consistency coefficient is  $\alpha = .93$ , and the reliability coefficients for each factor are .86, .89, and .83, respectively.

## Discussion

Findings supported the three-factor structure in the Turkish adaptation. The scale's reliability test provides acceptable reliability for the sub-factors. The convergent and discriminant validity results confirmed that the Turkish version of SVGS is a psychometrically sound measure.

### General Discussion

This research aims to introduce SVGS to Turkish literature. With this aim, we conducted two studies and a preliminary one. Based on the results, we concluded that the scale is valid and reliable and can be used to measure sexism in video games in the Turkish context.

SVGGS showed the highest correlation with masculinity ideology. Masculinity ideology is a set of cultural norms that impose how men should behave (Thompson et al., 1992), and it has a positive relationship with sexism (Barron et al., 2008; Leaper & Van, 2008). So, this outcome is compatible with the literature.

SVGGS showed a high correlation with femmephobia. Defined as the systematic devaluation of femininity, femmephobia maintains the unequal gender order by imposing limits on femininity and being a "proper woman," thereby upholding the dominance of masculinity over

femininity (Hoskin, 2017; 2019). Therefore, our finding aligns with the literature.

SGVS also showed positive correlations with social dominance orientation and gender system justification. Social dominance orientation reflects a preference for group-based hierarchy and inequality (Sidanius & Pratto, 1999), while gender system justification refers to the tendency to rationalize and protect the existing gender roles and hierarchy (Jost & Kay, 2005; Moreno-Jiménez, 2016). The positive correlations these have with sexism in video games are also compatible with the literature.

### Potential Limitations and Future Studies

The first limitation is related to the data-gathering strategy. Researchers cannot control the environmental factors when collecting online data. Secondly, SGVS is a self-report scale, and the reliability of self-report scales is questioned in the literature. With all these potential limitations, repeating the study with different samples and various measurement tools would be beneficial. Finally, given the relative novelty of digital environments in research, further studies are needed globally and in Türkiye.