Research Article

The Intersection of Faith and Pornography: A Turkish Moral Disapproval of Pornography Scale[*]

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Abstract

The development process and validity and reliability studies of the "Moral Disapproval of Pornography Scale" (MDSS) are described in this study. Moral disapproval of pornography use, one of the three components of the Anti-Pornography Problems Associated with Moral Inconsistency (APPM) model, refers to the psychological difficulties created by individuals' pornography use that contradicts their moral beliefs about pornography. This incongruence is shown to have a moderating role between individual's self-perception of addiction and their psychological well-being. In studies conducted abroad, it is seen that the phenomenon in question is examined with instruments consisting of moral and religious oriented items. These items were culturally adapted and turned into a scale that people with different religious beliefs and practices can easily answer. The exploratory factor analysis of the obtained scale was conducted with 634 participants. Subsequently, a confirmatory factor analysis of the scale was performed with a second sample of 580 individuals. The Cronbach's alpha coefficient for internal consistency was calculated as .862, and McDonald's Omega coefficient of .85, indicating good reliability. The exploratory factor analysis revealed that 71% of the total variance was explained and the items were loaded onto a single factor. In the confirmatory factor analysis, acceptable fit indices [$\chi2 / df = 1.81$, RMSEA = .005, AGFI = 0.97, CFI = 0.99, GFI = 0.98, RMR = 0.02] were obtained. Any criterion scale for moral disapproval of Pornography was not used to determine the concurrent validity due to lacking a previously developed scale in Turkish. In conclusion, the Pornography Moral Disapproval Scale (PMDS) was found to be a valid and reliable measure.

Keywords:
Religiousness • Pornography use • Moral disapproval • Moral incongruence

Introduction

The use of pornography has become very common in the world nowadays, especially in Western countries, turning into a normalized phenomenon (Grubbs et al., 2019). The debate continues about whether pornography use leads to addiction (Alarcón et al., 2019; Ley et al., 2014; Prause et al., 2017); however, there is also the issue of 'problematic use,' described as persistent and repetitive use of pornography causing disruption in one's life, accompanied by unsuccessful attempts to reduce or stop it (Bőthe et al., 2021; Kraus et al., 2016). Initially, the excessive frequency and duration of problematic pornography use were thought to be the factors making its use problematic (Cooper et al., 1999). However, later on, it has been observed that individuals perceiving themselves as addicted, regardless of their usage habits, contribute to perceiving their own usage as problematic (Grubbs, Exline, et al., 2015; Grubbs, Stauner, et al., 2015; Hook et al., 2014; Wilt et al., 2016).

Recent studies emphasize the interplay between religiosity and perceived pornography addiction, noting that higher levels of religiosity are correlated with increased self-perceived addiction (Abell et al., 2006; Grubbs et al., 2010). This is further supported by a large-scale study indicating that religiosity moderates the relationship between pornography use and self-perceived addiction (Grubbs et al., 2020). Moreover, religious individuals tend to experience greater psychological and spiritual distress when consuming pornography compared to their non-religious counterparts (Grubbs et al., 2010; Patterson & Price, 2012), often viewing their usage as a moral transgression and a loss of sexual innocence (Grubbs et al., 2015).

The concept of 'Pornography Problems Due to Moral Incongruence' has been proposed to better understand this phenomenon, highlighting the role of moral incongruence—discrepancies between one's attitudes towards pornography and their actual usage patterns (Brand et al., 2019; Burke & Miller MacPhee, 2020; Grubbs, Perry, et al., 2019a; Grubbs, Perry, et al., 2019b). This model suggests that individual differences in usage habits, emotional regulation, and moral incongruence significantly impact perceptions of addiction (Gola et al., 2022). Despite the model's insights, there is a notable gap remaining in literature concerning its applicability in Muslim countries, underscoring the need for culturally sensitive research to understand the unique moral frameworks within these contexts (Lewczuk et al., 2020).

Methodological limitations in pornography research, such as issues with operational definitions, sampling, and inference limits, highlight the need for more rigorous methodologies to enhance understanding and validity (Fisher & Kohut, 2020; Short et al., 2012). This need of rigor especially obvious when considering the moral disapproval of pornography could stem from various moral sources such as socio-political views (Lewczuk et al., 2020). And a relationship was observed between moral attitudes and religious beliefs (Grubbs, Exline, et al., 2015). This

intertwined relationships between religiosity and morality underscores the importance of developing new scales that are neutral concerning religiosity to accurately capture the essence of moral incongruence without mixing it with religious guilt (Štulhofer et al., 2022; Grubbs et al., 2019).

In response to these gaps, this study aims to develop a Moral Disapproval of Pornography Scale that is suitable for a Turkish context, considering the diverse religious beliefs and practices in the country. This scale will facilitate a deeper understanding of moral incongruence in perceived problematic pornography use and associated distress, contributing valuable insights into the broader discourse on pornography consumption (Grubbs et al., 2020a). Additionally, clinicians can then make more accurate diagnoses of Compulsive Sexual Behavior Disorder (CSBD) when they are aware of the intensity of the inconsistency experienced by individuals using pornography, steering clear of unwarranted diagnoses that might be influenced by religious and moral judgments (Grubbs et al. 2020a).

Method

The study was a scale development study in which the items were developed to assess moral disapproval of pornography followed by the reliability and validity analysis.

Study Group

A purposive and convenience sampling method was used for choosing the study group. Social media platforms, online groups including online self-help groups and email groups were used to invite participants. The only prerequisites were to be a volunteer, be at least 18 years old, and have consumed pornography during the previous six months. Since the study was not a psychiatric research, no diagnostic information was asked.

While determining the size of the study group, it was tried to reach the number of people recommended by Tabachnick et al. (2019) and Byrne (2016) for validity and reliability studies. Therefore, the size of the study group for the exploratory factor analysis of the scale was 634 people. The average age of the group ranged between 18 and 42 years, the mean age was 27 years and 40.3% were women, 57.8% were men and 1.9% were those who did not want to specify their gender and those who indicated their gender as other. 8% of the group have undergone or are undergoing high school education, while 57% have completed or are currently pursuing university education. The remaining 35% have undergone or are undergoing postgraduate education.

Confirmatory factor analysis was performed with a group of 580 people. The average age of the group ranged between 18 and 59, with an average age of 28. 41.4% women, 56.7% men and 2.3% people who did not want to specify their gender

and those who indicated their gender as other. Those who have received and are receiving high school education constitute 9%; those who have received and are receiving university education constitute 58%; those who have received and are receiving postgraduate education constitute 33% of the group. Prior to collect data in 2022, ethics committee approval was acquired by Marmara University Institute of Educational Sciences. A voluntary consent form was obtained from the participants.

Item Writing Process and Content Validity

The phenomenon of moral disapproval of pornography is generally asked using four items that capture both moral and religious dimensions, such as ''Viewing pornography online troubles my conscience'', ''Viewing pornography online violates my religious beliefs'', ''I believe that viewing pornography online is morally wrong,'' and ''I believe that viewing pornography online is a sin.'' The cumulative score from these items reflects the moral stance of individuals regarding this issue. However, research has identified a high correlation between items specifically tied to religious beliefs—namely, the second and fourth items—and those related to broader moral beliefs (Grubbs, Exline, et al., 2015). In light of this, a more religiously neutral version of the scale was developed by Volk et al. (2016) which omits direct references to religion; instead focuses on personal and moral values as well as an individual's conscience, with items like "viewing pornography violates my personal values," or "viewing pornography is inappropriate". This adaptation has led to the development of different versions of the scale that are neutral in terms of religiosity, allowing for the assessment of moral incongruence without the confounding effects of religious guilt.

Recognizing that religious individuals might shape their responses to conform with socially acceptable standards (Rasmussen et al., 2018), the adaptation of the scale for the Turkish context was approached with an emphasis on minimizing the religious aspect of disapproval. This was done to reduce the potential for social desirability bias among research participants. Thus, in developing the scale of moral disapproval of pornography, general moral values were foregrounded through items that did not directly denounce pornography on religious grounds, avoiding statements like "I think porn use is a sin". This approach reflects a broader trend in research aimed at exploring moral concerns to pornography beyond just religious regrets, building on earlier studies on moral disapproval (Grubbs et al., 2019; Lewczuk et al., 2020; Volk et al., 2016). Furthermore, the observed high correlation between religious and non-religious items underscores the complex interplay between these dimensions. Consequently, the morality-focused items were translated into Turkish and two reverse-scored items were added, which stated that pornography is an acceptable medium for individuals to experience human sexuality and recommendable practice. This strategy seeks to clearly explain why people may disapprove of pornography,

taking into account a wide range of moral and religious reasons related to this topic. The items derived from the literature, along with those newly introduced, were submitted to a linguistic expert and a psychologist specializing in this domain for review. Following their revisions and approval, the items were then implemented. The final version of the scale is as follows: "I think watching pornography is an acceptable way for a person to experience their sexuality", "I would recommend watching pornography to people I care about", "Watching pornography causes me to feel guilty", "I believe that watching pornography is morally wrong".

Data Collection and Analysis

All data was collected through an online form on google forms website. As recommended for online research and researching pornography (British Psychological Society, 2021; Buchanan & Zimmer, 2018; Rasmussen et al., 2018) data was collected via online forms in which no personal information was asked to keep participants anonymous For scoring the scale a sophisticated five-level Likert scale was employed, extending from a low to a high spectrum. Initially, the collected dataset was meticulously reviewed to identify and exclude any missing data. The dataset's normal distribution was then verified to ensure its suitability for advanced statistical procedures. Upon confirming the data's adherence to a normal distribution, exploratory factor analysis (EFA) was first conducted to identify the underlying structure of the scale. This was followed by confirmatory factor analysis (CFA) to validate the scale's structure as indicated by the EFA results. Furthermore, the reliability of the scale was assessed through the calculation of Cronbach's alpha coefficient, which surpassed the threshold required to establish acceptable internal consistency (Cronbach Alpha=0.862). All analyses were executed using SPSS version 26, AMOS 26 and Jamovi 22.

Results

Validity and Reliability

Exploratory Factor Analysis: Exploratory factor analysis method was applied to reveal the construct validity of the Moral Disapproval of Pornography Scale. As a result of the Barlett test (p=0.000<0.05), it was determined that there was a relationship between the variables included in the factor analysis. As a result of the test (KMO=0.774>0.60; $\chi2$=836,225; df=6), it was determined that the sample size was sufficient for factor analysis. In the factor analysis application, the Varimax method was selected to ensure that the structure of the relationship between the factors remained the same (DeVellis & Thorpe, 2022) . As a result of the factor analysis, the variables were grouped under a single factor with a total explained variance of

70.926%. The factor structure of the scale is shown below.

Table 1.
Moral Disapproval of Porn Scale Factor Structure

	Factor Load
Item 1	,762
Item 2	,812
Item 3	,883
Item 4	,904
Total variance=%70,926; Eigenvalue=2,837; Cronbach Alpha=0.862	

The factor analysis determined the eigenvalue of the factor to be 2.837, with factor loadings exceeding 0.4. The Scree plot related to the factor analysis is provided below. The Cronbach's alpha coefficient for internal consistency was calculated as .862, indicating good reliability (DeVellis & Thorpe, 2022). And as recommended, McDonald's Omega was calculated, yielding an omega coefficient of .85, further supporting the scale's internal consistency and reliability (McDonald, 2013).

Table 2.
Pearson Correlation Coefficients Among Items

	Item 1	Item 2	Item 3	Item 4
Item 1	1	.488**	.510**	.524**
Item 2	.488**	1	.519**	.558**
Item 3	.510**	.519**	1	.824**
Item 4	.524**	.558**	.824**	1

**Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation coefficients presented in Table 2 reveal the degree of linear association between items of the scale. Significant correlations were observed among all items at the 0.01 level (2-tailed). Notably, Item 3 and Item 4 exhibited the highest correlation coefficient (.824**), suggesting a particularly strong association between these two items. The correlation coefficients among the other items ranged from .488** to .558**, indicating moderate to strong associations. These results underscore the internal consistency of the scale, as evidenced by the significant and positive correlations among its items. The sample size of N=580 provides a robust basis for the reliability of these correlation estimates. The observed correlations are critical for the scale's validation process, supporting the construct validity of the scale by demonstrating that its items are related as expected. Item Reliability Statistics are also calculated and presented below:

Table 3.
Item Reliability Statistics

|				if item dropped	
	Mean	sd	item-rest correlation	Cronbach's α	McDonald's ω
Item 1	2.82	1.43	0.581	0.841	0.854
Item 2	3.95	1.35	0.603	0.834	0.847
Item 3	2.74	1.68	0.765	0.762	0.768
Item 4	2.77	1.74	0.789	0.750	0.755

These findings suggest that all items contribute positively to the scale's internal consistency, as evidenced by the substantial item-rest correlations. The Cronbach's α and McDonald's ω values are above the commonly accepted threshold for reliability (0.7), affirming the scale's reliability. However, the slight decrease in reliability metrics upon the potential removal of Item 3 or Item 4 highlights the importance of these items to the scale's coherence and internal consistency.

The scree plot supports the one-factor structure of the scale. The results of the confirmatory factor analysis are provided below:

Figure 1.
Diagram of Confirmatory Factor Analysis

Figure 2.
Diagram of Confirmatory Factor Analysis
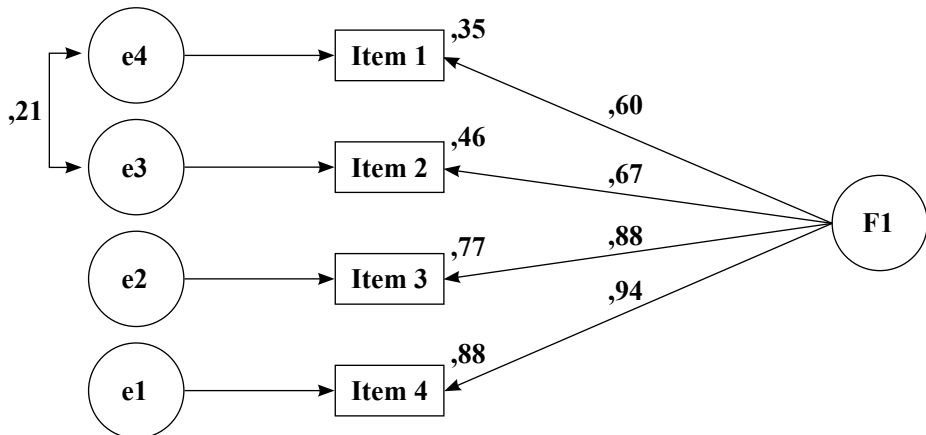
The commonly used goodness-of-fit indices in the literature were utilized in the study. The goodness-of-fit criteria for confirmatory factor analysis and the obtained values are presented below.

Table 4.
Goodness of Fit Statistics

Index	Normal Value*	Acceptable Value**	Value
χ^2	-	-	1.81
df	-	-	1
χ^2/sd	<2	<5	1.81
GFI	>0.95	>0.90	0.98
AGFI	>0.95	>0.90	0.97
CFI	>0.95	>0.90	0.99
RMSEA	<0.05	<0.08	0.05
RMR	<0.05	<0.08	0.02

*, ** (Schumacker & Lomax, 2004; Tabachnick et al., 2019; Wang & Wang, 2019)

The analysis results from the confirmatory factor analysis indicated that the goodness-of-fit statistics align closely with the previously established factor structure of the scale. This alignment suggests that the model fits the data in a manner that is compatible with the theoretical expectations and empirical findings documented in the relevant literature (Hu & Bentler, 1999), who advocate for specific thresholds to ascertain an acceptable fit (e.g., CFI > 0.95, RMSEA < 0.06). The standardized factor loadings and their corresponding t-values, detailed below exhibiting significant associations consistent with the hypothesized model structure.

Tablo 5.
Confirmatory Factor Analysis Factor Loadings

Items and Factors			β	Std. β	S.Error	t	p
Item4	<---	F1	1,000	,936			
Item3	<---	F1	,890	,876	,041	21,875	p<0,001
Item2	<---	F1	,562	,675	,036	15,404	p<0,001
Item1	<---	F1	,525	,595	,041	12,970	p<0,001

The examination of standardized coefficients reveals high factor loadings, low standard error values, and significant t-values. These results confirm the construct validity concerning the pre-defined factor structure.

Discussion

The development of the Moral Disapproval of Pornography Scale (MDPS) provides crucial insights into the complex interplay between pornography consumption and moral disapproval within the Turkish context. The rigorous statistical validation through Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) demonstrates the MDPS's unidimensional nature and its high internal consistency, reflected in a Cronbach's alpha coefficient of .862 and McDonald's Omega of .85

(DeVellis & Thorpe, 2022; McDonald, 2013). These results, supported by the Barlett test and KMO values, confirm the adequacy of the sample size and the relevance of the scale's items in capturing the construct it is designed to measure.

The strong correlations among the scale's items, as highlighted in the Pearson Correlation Coefficients, further validate the internal consistency of the MDPS. Particularly, the substantial correlations between Item 3 and Item 4 underscore the interconnectedness of these items, suggesting they play a crucial role in the conceptual coherence of moral disapproval towards pornography. These findings are consistent with the existing literature and emphasise the need to examine the constructs of moral disapproval and problematic pornography consumption together (Grubbs, Perry, et al., 2019a; Grubbs, Stauner, et al., 2015; Rasmussen et al., 2018). A recent study by Dinçer (2022) reinforces this connection, indicating that the dynamics of moral incongruence and perceived addiction are similarly present in the Turkish context.

The confirmatory factor analysis, showcasing fit indices well within acceptable ranges (Hu & Bentler, 1999; Schumacker & Lomax, 2004; Tabachnick et al., 2019; Wang & Wang, 2019), reinforces the scale's structural validity. This robust statistical grounding provides a strong foundation for the MDPS as a reliable measure to explore the nuances of moral disapproval of pornography within different cultural contexts.

The Moral Disapproval of Pornography Scale (MDPS) offers a unique perspective by separating moral disapproval from religiosity. This is a crucial step in creating culturally sensitive research methods for non-Western societies. Unlike existing scales that mix moral views with religion, the MDPS focuses on personal values and conscience, as proposed by Volk et al. (2016). This distinction opens the door for future research to compare scales including religious factors and validate the MDPS itself, ultimately leading to broader cross-cultural studies on pornography consumption.

The MDPS benefits both clinicians and researchers by allowing a more detailed look at the moral aspects of pornography use. It aims to bridge the gap in culturally sensitive methods for assessing attitudes towards pornography. This advancement paves the way for comparative studies across cultures, enriching our understanding of pornography consumption with a culturally aware perspective.

The study has some limitations. Despite the scale's design, social desirability bias (Rasmussen et al., 2018) might influence responses. Future research should explore the complex interplay of moral disapproval, cultural norms, and religious beliefs using qualitative methods to gain deeper insights into how these factors shape attitudes towards pornography. Overall, the MDPS makes a significant contribution to understanding pornography consumption by highlighting the importance of cultural and moral variations. By confirming its reliability and applicability, this study

strengthens academic discussions and emphasizes the need for culturally sensitive tools in pornography research. In this study, it was not possible to conduct a measurement invariance analysis of the developed scale. This situation should be considered a potential limitation of the study. This limitation has led to an inability to fully assess the validity and reliability of the scale across different demographic or cultural subgroups. In this context, it is recommended that future research be conducted to extend the generalizability and applicability of the scale to a wider population and different groups.

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