

Psychometric Development and Validation of Coercive Control Scale for Married Individuals in Pakistan

Rabia Saleem & Sobia Masood

Abstract

Background: Coercive control represents a pervasive yet under-recognized form of domestic abuse, particularly within marital relationships in Pakistan. Despite its high occurrence, limited empirical attention has been given to its typology, frequency, and psychological consequences. The present study aimed to conceptualize and develop a psychometrically robust scale for assessing coercive control among married individuals in Pakistan.

Method: A sequential exploratory mixed-methods design employing convenience sampling was utilized. The study comprised two phases. Phase I involved qualitative exploration through Focus Group Discussions (FGDs) with married individuals ($N = 57$; age range = 34–50 years) and semi-structured interviews with marital counselors and psychologists ($N = 3$). Thematic analysis guided the generation of an initial item pool, from which 42 items were retained. A preliminary pilot test was conducted with married individuals ($N = 60$; age range = 23–70 years; $M = 38.70$, $SD = 10.52$) to refine the scale. Phase II consisted of determining the factor structure and psychometric properties of the scale through Exploratory Factor Analysis (EFA) using a larger sample ($N = 500$; men = 251, women = 249; age range = 20–70 years; $M = 37.43$, $SD = 9.99$).

Results: The EFA results indicated a clear six-factor structure of coercive control. All subscales demonstrated satisfactory internal consistency, as evidenced by acceptable Cronbach's alpha coefficients, establishing internal reliability. Construct validity was supported through significant inter-subscale correlations and strong correlations of each subscale with the total score, confirming convergent and internal construct validity. Content validity was ensured during item development through expert review and qualitative thematic analysis. Overall, the findings indicate that the scale possesses sound reliability and validity for measuring coercive control among married individuals.

Conclusions: The study resulted in the development of an indigenous, psychometrically sound instrument for assessing coercive control among married individuals in Pakistan. Findings support the reliability and validity of the scale and highlight its potential utility for research, clinical assessment, and intervention planning in the context of marital abuse.

Keywords: Coercive control, scale development, exploratory factor analysis, psychometrics, marital relationships.

1. M.Phil Scholar, National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan
2. Professor, Department of Psychology, Rawalpindi Women University, Rawalpindi, Pakistan

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Background

Intimate partner violence (IPV) affects more than one-quarter of women globally (27%), making it a critical public health concern (Sardinha et al., 2022; World Health Organization, 2021). IPV is associated with severe and long-lasting psychological consequences, including post-traumatic stress disorder, depression, anxiety, substance use disorders, and suicidal ideation (World Health Organization [WHO], 2017). IPV encompasses physical, sexual, and psychological forms of abuse, with psychological IPV manifested through behaviors such as verbal degradation, intimidation, belittlement, and coercive control (WHO, 2017). Research has traditionally focused on physical, sexual, economic, and emotional violence (Howard et al., 2013; Kalokhe et al., 2016); however, these forms frequently co-occur with controlling behaviors through which perpetrators use threats, intimidation, and violent tactics to exert dominance over their partners (Kanougiya et al., 2022). According to Stark (2009), coercive control involves “structural forms of deprivation, exploitation, and command that compel obedience indirectly by monopolizing a partner’s behavior, restricting her choices, and limiting her access to essential supports,” as well as the “use of force or threats to compel or prevent specific behaviors” (p. 228). Coercive control comprises a range of nonviolent strategies including harassment, surveillance, intimidation, and restriction of autonomy that enable sustained domination over the partner (Stark, 2009; Stark & Hester, 2019; Murshid & Critelli, 2020). Such tactics may include threats to harm or kill the victim, children, or pets; social isolation from family and friends; interference with access to support services; and threats to financial security (Mechanic et al., 2008; Miller et al., 2010; Postmus et al., 2020). Reproductive coercion, such as controlling contraception or pregnancy-related decisions, may also be used. Stark (2009) emphasizes that coercive control is a gendered phenomenon, disproportionately perpetrated against women.

Richardson et al., (2020) conducted a study and found the victims of coercive control may not consider it as abuse but it is more prevalent than other forms of IPV (Kelly & Johnson, 2008). According to research, between 21 to 90 percent of heterosexual relationships started by men involve coercive controlling violence (Antai, 2011; Kanougiya et al., 2022; Sardinha et al., 2022; Mandal & Hindin, 2013; Sapkota et al., 2016). Like controlling behaviors are not associated with particular disputes or incidents, rather it becomes apparent in early years of relationship and the intensity increases over time (Hardesty & Raffaelli, 2015). Mostly the cases of coercive control are accompanied by other types of mistreatment including physical or sexual abuse (Anderson, 2008). Previous findings show that a pattern of coercive control can precede, motivate, or increase the likelihood of physical violence in intimate relationships especially when the desired action is not achieved by controlling tactics (Aizpurua et al., 2021; Hardesty et al., 2015; Howard et al., 2013). Scholars have now identifies new tactics of coercive control which are outside the traditional household like digital coercive control, which include monitoring of victim’s digital devices and stalking them online (Douglas et al., 2019; Dragiewicz et al., 2022).

A number of detrimental psychological effects are also linked to coercive control, such as depression,

posttraumatic stress disorder, anxiety, suicidal ideation and loss of self-worth Henry et al., 2021; Rivara et al., 2019). The previous researches indicated that the negative effects of IPV are greater for women when violence occurs in contexts of coercive control (Ansara & Hindin, 2010; Johnson, Leone, & Xu, 2014). In recent years, research has posited that physical violence is necessary for coercive control to be effective in intimate relationships between men and women (Aizpurua et al., 2021; Hardesty et al., 2015). Examining this concept is essential to accurately determine the safety and consequences for the one who is experiencing it, especially in situations where there are no signs of sexual assault, physical violence, or other crimes that carry legal penalties.

The understanding of intimate partner violence has been improved after the conceptual development of coercive control. It highlights the various tactics used by the abuser to maintain dominance by putting restrictions on victim autonomy, stalking and psychologically intimidating them, instead of just using the physical violence (Dutton & Goodman, 2005; Stark, 2009). The construct of coercive control has gained a lot of popularity in western countries, however its expression is deeply rooted in cultural values, gender roles which vary significantly across various cultures (Stark, 2009). Pakistan being a country where collectivist and patriarchal pattern of culture is widely followed, living in an intimate relationship i.e. marriage is regarded as family honor, religious duty and high expectations from the society. This also influences how control is maintained. Therefore it is crucial to study the dynamics of coercive control under the local socio-cultural patterns to guarantee effective interpretation and assessment. Researchers in Pakistan has mainly focused on the more visible forms of violence i.e., physical, emotional and sexual violence. The studies which utilized the instruments developed in the western culture such as Dutton and Goodman (2005) scale highlighted that many items are not culturally appropriate and fail to address the culturally embedded types of coercive control which are common in Pakistani households. Empirical evidence shows that control in Pakistani context can occur in various forms which include restrictions in mobility, economic dependence and religious duty of obeying. Such behaviors are not included in western scales but they are considered important and have severe psychosocial consequences (Mazher, Masood, & Ahsan, 2023; Parveen & Bano, 2023).

In Pakistan, studies on coercive control have been carried out using a scale developed by Dutton and Goodman (2005), which contains many items that may not fully explain the controlling expressions used in Pakistani context. It has been highlighted in the literature that coercive control is context dependent in nature, and its expression varies from culture to culture (Stark, 2009). With coercive control as a construct becoming popular among researchers, and with no indigenous culture specific measure of coercive control available, the need to develop an indigenous scale was felt. Aim of the present study is to create and validate a psychometrically sound, culture appropriate indigenous coercive control scale that comprises of the full range of controlling behaviours found in Pakistani society. This study addresses a visible methodological and theoretical gap and it will further provide the foundation to future researchers, policy developers and clinician in the area of intimate partner violence.

Method

Objectives

The primary objective of this study was to develop an indigenous scale for assessing coercive control among married individuals in Pakistan. This involved integrating culturally relevant factors, insights from the local sociocultural context, and expert evaluations to ensure conceptual clarity and theoretical grounding of the construct. A second objective was to rigorously examine the psychometric properties of the newly developed scale through quantitative analyses, including evaluations of its reliability and validity, to establish it as a scientifically sound measure for use in research and clinical settings.

Research Design

The study adopted an exploratory sequential mixed-methods research design, which is appropriate for developing and validating psychological measures grounded in cultural and contextual understanding. Formal ethical approval was obtained from the Research Ethics Committee of the Department of Psychology, Quaid-i-Azam University, Islamabad, Pakistan, prior to data collection. The research was conducted in two major phases: (1) a Qualitative Phase, aimed at conceptual exploration and item generation, and (2) a Quantitative Phase, focused on psychometric evaluation of the newly developed scale.

Phase I: Qualitative Phase

Phase I was implemented in two parts. The first part consisted of collecting rich, descriptive data to understand how coercive control is perceived and experienced within Pakistani marital relationships. This involved (a) conducting in-depth interviews with subject matter experts including marital counselors and researchers and (b) carrying out seven focus group discussions with married men and women. The goal was to identify culturally relevant behaviors, themes, and patterns that reflect coercive control in the local context. Married men and women (married for at least one year and having at least one kid) were contacted to get first hand views regarding the perception of coercive control or controlling tactics used by ones partner. Overall, 57 married individuals participated in the discussions. Each group consisted of at least 8 participants. Participants of focus group discussion had an age range of 34-50 years. For the purpose of conducting focus group discussions (FGDs), a focus group guide was prepared. The guide for FGDs was developed after a thorough and detailed review of past literature. Based on the extensive review of literature, significant themes and elements were highlighted which helped in developing specific questions for focus group. For conducting the FGDs, all participants who agreed to participate were briefed about the purpose of conducting the focus group discussion. In the whole process of focus group discussions ethical considerations were specially kept in mind. Qualitative interviews and focus group discussions were analyzed with the help of thematic analysis. The results of thematic analysis highlighted 3 main themes such as (1) meaning of control, (2) tactics/ways of controlling, (3) reasons to control.

Generation of Item Pool. Initially, a pool of 78 items was generated by the researcher covering all themes emerged in the part 1. After generation of items, expert opinion was taken regarding the suitability of items. For this

purpose, 4 faculty members of National Institute of psychology with a sound background in psychological testing were approached and requested to critically review each item and give their valuable suggestions to establish face and construct validity. They were also requested to highlight the items which they thought were repetitive, ambiguous, specific to only one gender or needs to be modified. On the bases of the feedback, a total of 42 items were retained for the initial scale. After the expert's feedback, it was decided to arrange the items on a four-point Likert type scale. For Coercive Control Scale, response options were *Never* = 1 to *Always* = 4 were selected. No item was identified as negatively worded so there was no need of reverse scoring.

Part 2: The aim of the pilot study was to administer the newly developed indigenous scale and check the understanding level of the scale in the targeted population. A sample of 60 married men ($n = 30$) and women ($n = 30$) was selected through convenience sampling from Islamabad and Rawalpindi. The inclusion criterion was a married men and women (working/non-working) who was married for at least 1 year of duration, having at least one child and having no exposure of physical violence. The age ranged from 23-70 ($M = 38.70$; $SD = 10.52$). All the participants were requested to carefully examine the items of the scale for clarity, comprehension and any ambiguity regarding items or the language used. They were also requested to highlight any item which they think is hard to interpret to refine its comprehensibility and clarity. With the help of probing interviews with the sample, it was found that no item was regarded as vague or ambiguous. All participants reported good comprehension and clarity for the indigenously developed scale of coercive control.

Phase II: Quantitative Phase

Main Study: Validation of the Coercive Control Scale

This study was carried to evaluate the psychometric properties of the coercive control scale for Pakistani married population. Exploratory factor analysis (EFA) was conducted to explore the factor structure of the items and to discard any redundant items for the sample of married individuals. Moreover, items internal consistency was also checked through reliability analyses. In main study, the foremost aim was to check relationships among scales and its subscales. For this purpose Pearson Product Moment correlations were calculated.

Sample and Procedure

In main study, convenient sampling technique and correlation research design was applied to conduct the study. Five hundred married individuals (men = 251 and women = 249) age ranged between 20-70 years ($M = 37.43$, $SD = 9.99$) were recruited from Islamabad and Rawalpindi. For carrying out the study various organizations (i.e. schools, offices) were contacted to get permission for conducting the research with their employees. After taking permission from the administration, questionnaire booklets were distributed. Participants were asked to give their consent. Keeping in mind the sensitive and personal nature of few questions in the questionnaire, special attention and ample amount of time was given for building rapport with study participants so that they fill the questionnaire honestly. A total of 550 questionnaires were distributed out of which 520 were

returned. 20 booklets were discarded due to unanswered questionnaires. For fulfilling the inclusion criteria of the study, participants were also asked to answer 3 questions regarding exposure to physical violence. These items were used solely for the purpose of controlling for physical violence and were not the part of any further analyses. After controlling for physical violence, out of 500 total sample, 17 women who reported experience of physical violence were also excluded from the total sample as per the inclusion criteria. Analyses for main study were carried out on a sample of ($N = 483$).

Results

Exploratory Factor Analysis

To explore factor structure of scale exploratory factor analysis by using principal axis factor technique of extraction with oblique rotation was used. Inter item correlations were calculated to check that whether the items were related or not. The result showed significant ($p \leq .01$) inter item correlations among the items. As the items were correlated, oblique rotation was selected to be used. Total sample size was approximately 12 respondents against one item, so Promax was appropriate type of oblique rotation to be used in the study. Promax is generally chosen as it is quicker and simpler (Hooper, 2012). 42 items from the original version of the coercive control scale were used to gather data. The Kaiser-Meyer-Olkin (KMO) test of sampling adequacy was used to determine whether the sample size was appropriate given the data. Kaiser (1974) asserts that the KMO test's permissible range is greater than .60. For this data the value of KMO was .92, which suggests that the data is suitable for factor analysis (Field, 2009). Bartlett's test of sphericity is a test which examines the null hypothesis that the original correlation matrix is an identity matrix.

This test should be significant (i.e., it should have a significance value of less than 0.05) (Field, 2009). For this data, significance of ($p < .000$) of Bartlett's test of sphericity $\chi^2 (861) = 11510.326$ was found to be significant showing that the sample was adequate for EFA. Initially, 8 factors were suggested with Eigen values greater than 1. The scree plot suggested 6 factor solution. Different solutions were applied by fixing the number of factors. As the scree plot suggested, a meaningful picture was obtained on 6 factors solution through oblique rotation that converged on 25 iterations with Eigen values greater than 1 which explained 49.46 % of cumulative variance. According to the criteria of Field (2005) thirty-two items out of 42 were retained after EFA with factor loadings ($> .30$). Items with cross-loading and loading less than .30 were eliminated. The total content and face validity of the items loaded on each factor with loadings ($> .30$) were used to analyze the factor solution. Based on the opinions of SMEs, the explanation of variation, and the content's pertinence to the factor, the six-factor solution was kept.

The findings of performing Principal Axis Factor analysis utilizing oblique rotation (i.e., Promax) to investigate the factor structure and validity of the CCS are displayed in Table 1. The findings made it evident that the products fell into six categories, and communalities were also mentioned. Communalities indicate the proportion of common variance in a variable. According to Thonggrattana (2012), a variable with no particular variance has a

communality value of 1, while a variable that shares no variation with other variables has a communality value of 0. However, there is no threshold for removing any variable based on the value of communalities.

Additionally, communalities have been presented in Table 1, indicated by h2. The majority of the items' communalities had values greater than .4, indicating less particular variance between the variables. Additionally, the results show that factor 1 accounts for 32.69% of variation and has an Eigen value of 13.37. Factor 2 accounts for 4.718% of the variance and has an Eigen value of 1.982. 3.956% of the variance is explained by factor 3, which has an Eigen value of 1.661. Factor 4 accounts for 3.099% of variation and has an Eigen value of 1.302. Factor 5 accounts for 2.887% of variance and has an Eigen value of 1.213. Factor 6 has an Eigen value of 1.302 and explains 3.099% of variance. Factor 5 has Eigen value of 1.213 and explains 2.887% of variance. With an Eigen value of 1.344, factor 6 accounts for 2.111% of the variation. The cumulative variation, or 49.46%, that can be explained by six factors is likewise displayed in Table 1. In the social sciences, cumulative variance values can fall below 50% and still be regarded as acceptable, although large values are indicative of good factor solutions, according to William, Onsmann, and Brown (2010). Furthermore, there is no pre-determined criteria or limit for cumulative variance. Finally, out of 42 items, 32 items were selected to be included in the final form of the CCS. None of the items were reverse coded.

Content Validity

Content validity was developed with the help of three Ph.D. researchers and three assistant professors at National Institute of Psychology (NIP), Quaid-i-Azam University Islamabad, Pakistan. They were given the extracted factors for the proper labels following Principal Axis Factor analysis in order to guarantee the content validity of each item within its subscale. The six factors were labeled as (1) Use of Authority consisting of 8 items indicating dominance, authority, keeping hold of household decisions, showing superiority in everyday matters. (2) Surveillance consisted of 6 items indicating monitoring, keeping an eye on partner's activities like checking mobile. (3) Intimidation consisted of 6 items indicating use of threats of negative consequences if his/her commands are not fulfilled. (4) Restricting Contact with Relatives consisted of 5 items indicating restrictions upon meeting relatives, parents and criticizing partner's family. (5) Control on Social Contacts consisted of 4 items showing controlling or limiting contacts with friends or meeting/interacting with opposite gender, and displaying unnecessary possessiveness. (6) Sexual coercion consisted of 3 items showing dominance in sexual activities and doing sexual activities without the consent of the partner. The coercive control scale's final version had thirty-two items and response choices ranging from Never = 1 to Always = 4. The score ranged from 32 to 128 where high score shows high experience of coercive control by spouse and low score indicate low experience of coercive control by spouse.

Construct Validity

For establishing psychometric properties of the scale, reliability was checked by Cronbach Alpha Coefficients. In table 2, results of the current study shows that alpha coefficients of coercive control scale and its subscales have

Table 1

Factor Loadings of the Coercive Control Scale (CCS) based on Principal Axis Factoring with Promax Rotation (N = 500)

Serial No.	Item No. in Initial Form	Item No. in Final Form	F1	F2	F3	F4	F5	F6	h^2
1	19	14	.93	.10	-.20	.06	-.20	.00	.67
2	22	17	.67	-.49	-.01	.10	.00	.03	.54
3	28	22	.68	-.16	-.02	-.09	.19	.03	.46
4	20	15	.65	.04	.03	.03	.12	-.12	.58
5	23	18	.64	.11	.03	-.19	.10	-.01	.48
6	24	19	.64	.09	.08	-.17	-.16	.15	.44
7	30	23	.63	-.04	-.01	.04	.01	.03	.43
8	21	16	.61	-.00	.06	.17	.03	-.11	.56
9	14	9	-.07	.78	.06	-.03	.12	-.05	.66
10	16	11	.05	.77	-.12	-.15	.14	-.01	.57
11	15	10	-.17	.66	.11	.08	.06	-.07	.48
12	13	8	-.07	.62	.22	-.04	.06	-.01	.51
13	17	12	.15	.55	.01	.03	-.03	-.01	.42
14	18	13	.30	.44	-.05	.02	-.17	.09	.36
15	32	25	.03	.04	.82	-.06	-.06	.11	.72
16	31	24	.09	.02	.79	-.08	-.02	-.04	.61
17	11	6	.02	.02	.63	.09	-.08	-.05	.44
18	12	7	.02	.10	.59	.19	-.15	-.07	.51
19	27	21	.01	-.03	.58	.05	.09	-.02	.41
20	10	5	-.02	.12	.56	.25	-.13	.01	.56
21	8	4	.00	.02	.09	.80	-.15	-.01	.67
22	6	2	-.07	.08	.02	.76	-.01	.11	.66
23	7	3	-.06	-.10	-.01	.73	.05	.04	.47
24	5	1	-.07	.05	.02	.62	.17	-.00	.53
25	26	20	.25	-.09	.08	.41	.14	-.02	.48
26	40	31	.11	.07	-.16	-.04	.70	-.00	.50
27	39	30	-.05	.04	.02	-.02	.67	.02	.45

28	37	29	-.00	.05	.27	.01	.58	-.09	.56
29	42	32	.01	.22	-.37	.25	.53	.11	.48
30	34	26	.06	.06	.05	-.03	-.09	.88	.83
31	35	27	-.03	-.09	-.05	.22	.17	.56	.45
32	36	28	.14	-.08	.28	-.08	.12	.43	.48
Eigen values			13.73	1.982	1.661	1.302	1.213	1.344	
% of variance			32.69	4.718	3.956	3.099	2.887	2.111	
Cumulative %			32.69	37.40	41.36	44.46	47.35	49.46	

Note. Factor Loading > 0.40 have been listed in each factor, h^2 = Communalities.

Table 2

Means, Standard Deviations, Alpha Reliabilities, and Correlations between CCS and its Subscales (N = 500)

Scale	No. of Items	M	SD	α	UOA	SUR	INT	RCR	CSC	SC	CCS
UOA	8	13.43	5.77	.93	-	.55**	.39**	.28**	.49**	.45**	.86**
SUR	6	9.69	3.87	.88		-	.32**	.35**	.48**	.32**	.78**
INT	6	7.47	2.83	.83			-	.30**	.19**	.33*	.49**
RCR	5	6.50	2.54	.86				-	.34**	.24**	.44**
CSC	4	6.97	2.89	.76					-	.35**	.69**
SC	3	4.32	1.98	.76						-	.60**
CCS	32	48.73	15.47	.93							-

Note. UOA = Use of Authority; SUR = Surveillance; INT = Intimidation; RCR = Restricting Contact with Relatives; CSC = Control on Social Contacts; SC = Sexual Coercion; CCS = Coercive Control Scale, * $p < .05$ ** $p < .01$.

Table 3

Mean Differences along Gender on Coercive Control Scale and its Subscales (N = 500)

	Men $n = 251$ $M(SD)$	Women $n = 249$ $M(SD)$	t	p	95% CI		Cohen's d
					LL	UL	
CCS	46.5(11.0)	51.4(19.1)	3.2	.00	1.7	7.1	0.2
UOA	12.1(4.7)	15.0(6.5)	5.2	.00	1.6	3.6	0.4
SUR	9.8(3.7)	9.6(4.2)	-1.1	.24	-1.0	0.27	-
INT	7.7(2.7)	8.6(3.3)	3.0	.00	0.29	1.36	0.2
RCR	7.5(2.9)	7.7(3.5)	.68	.49	-0.37	0.76	-
CSC	6.8(2.5)	7.1(3.2)	1.3	.18	-0.16	0.84	-

Note. CCS = Coercive Control Scale; UOA = Use of Authority; SUR = Surveillance; INT = Intimidation; RCR = Restricting Contact with Relatives; CSC = Control on Social Contacts; SC = Sexual Coercion.

satisfactory reliability for married individuals of Pakistani population. The alpha coefficients for the 32 items on the CCS and its six subscales are displayed in Table 2. For CCS, the Cronbach alpha coefficient was .9. High alpha coefficient values show that the scale provides a trustworthy way to evaluate the underlying construct and is internally consistent. Inter-scale correlations are also showed in Table 2. Inter-subscale correlations are also significant that ranged from .32 - .86 at $p < .000$. Table 2 also shows the relationship among the Coercive Control Scale with its subscales. It is clear from the results that all the subscales showed significant relationship with the total. Subscales to total correlations are very strong ranging from .60 - .86 at $p < .000$ level, indicating that the subscales are measuring the same construct of coercive control. Hence ensuring the construct validity of CCS. Contrasted group validity was established by checking the mean differences on the basis of gender across coercive control scale and its subscale.

Table 3 is showing mean differences on the basis of gender on coercive control scale and its subscales. In table 3 it can be seen that women are reporting significantly higher than men on coercive control and its subscales, except for the subscale of surveillance on which men have high score.

Discussion

The primary aim of this study was to develop and validate an indigenous, psychometrically sound scale for assessing coercive control among married individuals in Pakistan. The findings offer important theoretical and empirical insights into the phenomenon of coercive control and address a critical gap in the existing literature. Although coercive control is recognized as a central mechanism underlying intimate partner violence (IPV) internationally, empirical attention in Pakistan has remained primarily focused on physical, sexual, and emotional abuse. Nonviolent forms of domination such as surveillance, intimidation, and restriction of autonomy have received substantially less attention, despite their known detrimental impact on psychological well-being and relationship functioning (Dutton et al., 2006; Hardesty et al., 2015). However, according to Dutton et al., (2006) regardless of the efforts made still there is little understanding about the mechanism through which coercive control works. Due to the little understanding of coercive control in intimate relations and context dependent nature of this construct, qualitative research was important to conduct to get firsthand views of the individuals experiencing it. Understanding the perspectives of individuals in our society is important for conceptualization of coercive control in Pakistani culture. As far as we are aware, Pakistani society does not adequately measure the concept of "nonviolent coercive control."

The main objective of this study was to develop a reliable and valid scale of coercive control. For this purpose, a Likert type scale was developed because it helps in quantification of attitudes by an empirically approved approach (Joshi et al., 2015). In social sciences, rating scales are commonly used and such instruments often use Likert type scales (Croasmun & Ostrom, 2011). Exploratory factor analysis was carried out to explore and reveal the underlying factors, Principal Axis Factoring was selected as a method of extraction with Oblique (Promax) rotation. This method of extraction is recommended when the data does not meet the assumption of normality (Costello & Osborne, 2005).

Six meaningful factors were finalized with 32 items and it was concluded that coercive control is a multidimensional construct. The multifactor solution was consistent with previous literature (Dutton et al., 2006). Overall, six factors emerged in factor analysis. Factor 1 was named "use of authority" which indicates the dominating role of one's partner, keeping hold of household matters, ruling the partner and feelings of superiority. Factor 2 was named "surveillance" which indicates the monitoring of daily life activities of the partner, spying, mobile checking, asking to whom he/she was talking on call or what he/she did in his/her absence and investigation from children. Factor 3 was named "intimidation" which signifies the use of threats and terrorization about the negative consequences if his/her demands will not be met. Bullying in front of children, and threatening about the future of children in case of separation/divorce. Factor 4 was named "restricting contact with relatives" which signifies limiting contact with parents, relatives, not allowing to meet them and criticizing his/her family. Factor 5 was named "control on social contacts" which signifies controlling and limiting contacts with friends, not allowing to interact with opposite gender, and in case of going out of home insisting on coming back home at a fixed time. Factor 6 was named "sexual coercion" which signifies indulging in sexual activities without the will of the other partner and not discussing the use of birth control methods.

Another objective of this study was to establish the content, construct and contrasted group validity and psychometrics properties of the scale. For this purpose, Cronbach's Alpha reliabilities and Person Product Moment Correlations were computed for the scale and its subscales to check the psychometric properties. The results showed high reliabilities for the scale (.93) and its subscales (see Table 2). High reliability coefficients indicate that the measure is reliable, while high correlation of the subscales with the total demonstrates that the subscales measure the same construct, thus confirming the construct validity. For establishing contrasted group validity, mean differences were checked on the basis of gender. The results (Table 3) clearly showed that women were reporting significantly higher than men on coercive control and its subscales.

Novel Contributions

This study makes a unique contribution by developing the first indigenous, culturally grounded scale for assessing coercive control among married individuals in Pakistan. Unlike existing tools that focus mainly on physical violence or Western conceptualizations, this scale captures subtle, context-specific forms of nonviolent control shaped by local sociocultural norms, such as interference with extended family ties and restrictions on mobility. Through a rigorous mixed-methods approach, the study provides a psychometrically robust measure that advances research, clinical assessment, and policy efforts related to intimate partner dynamics in Pakistan.

Implications

The current study is distinctive in that it has employed a comprehensive qualitative approach to comprehend the phenomena of coercive control in Pakistani society. The detailed exploration of the coercive control construct has identified cultural specific themes on which it is practiced in our society. The scale developed in this study

will provide a more reliable and precise way to quantitatively study the construct of coercive control. The findings can be helpful in the exploration of the complex context in which coercive control occurs, enabling us to move beyond the physical effects of IPV. It will deepen our understanding of the developmental sequence of IPV. This study will help in drawing attention of all the stakeholders including government, law enforcement agencies, researchers and non-governmental organization towards the non-physical form of abuse (i.e., coercive control). The findings of this study may therefore serve as a precursor to prompt exploration of further avenues in this zone.

Limitations and Future Directions

The present study is useful in Pakistan however; some limitations have also been observed. The present study only had participants from majorly urban cities i.e Islamabad and Rawalpindi, and did not adequately represent the rural population. Future researches can plan to select a more diverse sample for better generalization. A limitation which was observed during the phase of data collection both qualitative and quantitative was that people were reluctant to participate in the study due to the sensitive nature of the topic. Usually, people in our culture are not willing to discuss their personal matters in front of others which might have limited the findings of present research. Future researchers using the coercive control scale can carry out confirmatory factor analysis (CFA) to confirm the factor structure emerged in present study. This will further enhance the validation of the scale. As coercive control is a lifelong process and its patterns keep on changing, it is recommended to conduct longitudinal studies. The validity of this tool can be enhanced by subsequent studies by providing evidence for convergent and discriminant validity. A strong correlation between CCS and other tools measuring similar constructs is necessary.

Conclusion

This study represents a significant step toward understanding and measuring coercive control within the Pakistani cultural context. The relatively new concept of coercive control has generated a lot of popularity due to its

distinct focus on non-physical form of abuse. In Pakistan the focus of domestic violence researchers has been on studying the physical form of violence neglecting the non-physical forms and carrying out more quantitative researches instead of using qualitative methods. The present study was an effort to fill this gap in literature. Coercive control is a quite new phenomenon among researchers of Pakistan so there is scarcity of researches and no attempts have been made to study the construct qualitatively. Keeping in mind the context dependent nature of coercive control, it was decided to qualitatively explore the phenomenon to get the firsthand views of Pakistani population about what is coercive control in their perception. The qualitative exploration was beneficial because it enabled us to deduce the perspectives of Pakistani men and women on coercive control instead of imposing a western definition upon them. An indigenous scale was developed for coercive control. The psychometric evaluation indicated a coercive control scale with six factor structure with satisfactory internal consistency, validity, reliability which confirmed its robustness as a culturally appropriate tool for measuring coercive control within the Pakistani context.

Ethical Consideration

The study was approved by National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan. Consent Form was taken before taking data and participants were asked to take voluntary participation.

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Availability of data and materials

The data sets used and analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions/Author details

Rabia Saleem conducted this study under the supervision of Dr. Sobia Masood.

Corresponding author

Correspondence to *Masood, S.*
sobia.masood@f.rwu.edu.pk.

References

- Aizpurua, E., Copp, J., Ricarte, J. J., & Vázquez, D. (2021). Controlling behaviors and intimate partner violence among women in Spain: An examination of individual, partner, and relationship risk factors for physical and psychological abuse. *Journal of Interpersonal Violence*, 36(1-2), 231-254. <https://doi.org/10.1177/0886260517723744>
- Anderson, K. L. (2008). Is partner violence worse in the context of control? *Journal of Marriage and Family*, 70(5), 1157-1168. <https://doi.org/10.1111/j.1741-3737.2008.00557>
- Ansara, D. L., & Hindin, M. J. (2010). Exploring gender differences in the patterns of intimate partner violence in Canada: A latent class approach. *Journal of Epidemiology & Community Health*, 64(1), 849-854. <https://doi.org/10.1136/jech.2009.095208>
- Antai, D. (2011). Controlling behavior, power relations within intimate relationships and intimate partner physical and sexual violence against women in Nigeria. *Biomed Central Public Health*, 11, 511. <https://doi.org/10.1186/1471-2458-11-511>
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1-9. <https://doi.org/10.7275/vjv1-4868>
- Croasman, J. T., & Ostrom, L. (2011). Using Likert-Type scales in the social sciences. *Journal of Adult Education*, 40(1), 19-22.
- Crossman, K. A., Hardesty, J. L., & Raffaelli, M. (2015). "He could scare me without laying a hand on me": Mothers' experiences of nonviolent coercive control during marriage and after separation. *Violence Against Women*, 22(4), 454-473. <https://doi.org/10.1177/1077801215604744>
- Douglas, H., Harris, B. A., & Dragiewicz, M. (2019). Technology-facilitated domestic and family violence: Women's experiences. *The British Journal of Criminology*, 59(3), 551-570. <https://doi.org/10.1093/bjc/azy068>
- Dragiewicz, M., Woodlock, D., Salter, M., & Harris, B. (2022). "What's mum's password?": Australian mothers' perceptions of children's involvement in technology-facilitated coercive control. *Journal of Family Violence*, 37(1), 137-149. <https://doi.org/10.1007/s10896-021-00283-4>
- Dutton, M. A., & Goodman, L. A. (2005). Coercion in intimate partner violence: Toward a new conceptualization. *Sex Roles*, 52(11-12), 743-756. <https://doi.org/10.1007/s11199-005-41966>
- Dutton, M. A., Goodman, L., & Schmidt, R. J. (2006). Development and validation of a coercive control measure for intimate partner violence: Final technical report. *NCJ Publication*, 214438.
- Field, A. (2009). *Discovering statistics using SPSS*. London: Sage publications.
- Hardesty, J. L., Crossman, K. A., Haselschwerdt, M. L., Raffaelli, M., Ogolsky, B. G., & Johnson, M. P. (2015). Toward a standard approach to operationalizing coercive control and classifying violence types. *Journal of Marriage and Family*, 77(4), 833-843. <https://doi.org/10.1111/jomf.12201>
- Henry, R. S., Perrin, P. B., Coston, B. M., & Calton, J. M. (2021). Intimate partner violence and mental health among transgender/gender nonconforming adults. *Journal of Interpersonal Violence*, 36(7-8), 3374-3399. <https://doi.org/10.1177/0886260518775148>
- Howard, L. M., Oram, S., Galley, H., Trevillion, K., & Feder, G. (2013). Domestic violence and perinatal mental disorders: a systematic review and meta-analysis. *PLoS medicine*, 10(5), e1001452. <https://doi.org/10.1371/journal.pmed.1001452>
- Johnson, M. P., Leone, J. M., & Xu, Y. (2014). Intimate terrorism and situational couple violence in general surveys: Ex-spouses required. *Violence against Women*, 20(2), 186-207. <https://doi.org/10.1177/1077801214521324>
- Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science and Technology*, 7(4): 396-403.
- Kaiser, H. F. (1974). An index of factorial simplicity. *psychometrika*, 39(1), 31-36. <https://doi.org/10.1007/BF02291575>
- Kalokhe, A. S., Stephenson, R., Kelley, M. E., Dunkle, K. L., Paranjape, A., Solas, V., ... & Sahay, S. (2016). The development and validation of the Indian family violence and control scale. *PLoS One*, 11(1), e0148120. <https://doi.org/10.1371/journal.pone.0148120>
- Kanougiya, S., Daruwalla, N., Gram, L., Sivakami, M., & Osrin, D. (2022). Domestic coercive control and common mental disorders among women in informal settlements in Mumbai, India: a cross-sectional survey. *Journal of interpersonal violence*, 37(19-20), NP17934-NP17959. <https://doi.org/10.1177/08862605211030293>
- Kelly, J. B., & Johnson, M. P. (2008). Differentiation among types of intimate partner violence: Research update and implications for interventions. *Family Court Review*, 46(3), 476-499. <https://doi.org/10.1111/j.1744-1617.2008.00215>
- Mandal, M., & Hindin, M. J. (2013). Men's controlling behaviors and women's experiences of physical violence in Malawi. *Maternal and Child Health Journal*, 17(7), 1332-1338. <https://doi.org/10.1007/s10995-012-1137->
- Mazher, S., Masood, S., & Ahsan, S. (2023). Coercive Control, Coping-efficacy, and Mental Health in Married Individuals: Does Gender Matter?. *Pakistan Journal of Social and Clinical Psychology*, 21(1), 28-36.
- Mechanic, M. B., Weaver, T. L., & Resick, P. A. (2008). Mental health consequences of intimate partner abuse: A multidimensional assessment of four different forms of abuse. *Violence against women*, 14(6), 634-654. <https://doi.org/10.1177/1077801208319283>
- Miller, E., Decker, M. R., Mccauley, H. L., Tancredi, D. J., Levenson, R. R., Waldman, J., Schoenwald, P., & Silverman, J. G. (2010). Pregnancy coercion, intimate partner violence and unintended pregnancy. *Contraception*, 81(4), 316-322. <https://doi.org/10.1016/j.contraception.2009.12.004>
- Murshid, N. S., & Critelli, F. M. (2020). Empowerment and intimate partner violence in Pakistan: results from a nationally representative survey. *Journal of Interpersonal Violence*, 35(3-4), 854-87. <https://doi.org/10.1177/0886260517690873>
- Parveen, T., & Bano, Z. (2023). Development and Validation of Domestic Violence Scale for Intimate Partners. *Pakistan Armed Forces Medical Journal*, 73(1), 310.
- Postmus, J. L., Hoge, G. L., Breckenridge, J., Sharp-Jeffs, N., & Chung, D. (2020). Economic abuse as an invisible form of domestic violence: A multicountry review. *Trauma, Violence, & Abuse*, 21(2), 261-283. <https://doi.org/10.1177/1524838018764160>

- Richardson, R., Nandi, A., Jaswal, S., & Harper, S. (2020). The effect of intimate partner violence on women's mental distress: A prospective cohort study of 3010 rural Indian women. *Social Psychiatry and Psychiatric Epidemiology*, 55(1), 71-79. <https://doi.org/10.1007/s00127-019-01735-5>
- Rivara, F., Adhia, A., Lyons, V., Massey, A., Mills, B., Morgan, E., ... & Rowhani-Rahbar, A. (2019). The effects of violence on health. *Health Affairs*, 38(10), 1622-1629. <https://doi.org/10.1377/hlthaff.2019.00480>.
- Sapkota, D., Bhattarai, S., Baral, D., & Pokharel, P. K. (2016). Domestic violence and its associated factors among married women of a village development committee of rural Nepal. *Biomed Central Research Notes*, 9(1), 178. <https://doi.org/10.1186/s13104-016-1986-6>.
- Sardinha, L., Maheu-Giroux, M., Stöckl, H., Meyer, S. R., & García-Moreno, C. (2022). Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018. *The Lancet*, 399(10327), 803-813. [https://doi.org/10.1016/S0140-6736\(21\)02664-7](https://doi.org/10.1016/S0140-6736(21)02664-7).
- Stark, E. (2007). *Coercive control: How men entrap women in everyday life*. Oxford: Oxford University Press.
- Stark, E. (2009). *Coercive control: The entrapment of women in personal life*. New York, NY: Oxford University Press.
- Stark, E. (2012). Re-presenting battered women: Coercive control and the defense of liberty. In *Violence against women: Complex realities and new issues in a changing world*. University of Quebec Press.
- Stark, E., & Hester, M. (2019). Coercive control: Update and review. *Violence Against Women*, 25(1), 81-104. <https://doi.org/10.1177/1077801218816191>
- Thongrattana, P.T. (2012). Analysis of the uncertainty factors affecting the sustainable supply of rice production in Thailand (Unpublished doctoral dissertation). University of Wollongang, Thailand.
- World Health Organization. (2017). *Intimate partner and sexual violence against women: Fact sheet*. <https://www.who.int/news-room/fact-sheets/detail/violence-against-women>
- World Health Organization. 2021. *Violence Against Women Prevalence Estimates, 2018: Global, Regional and National Prevalence Estimates for Intimate Partner Violence Against Women and Global and Regional Prevalence Estimates for Non-Partner Sexual Violence Against Women*. World Health Organization.

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