

Development and Validation of Violent Extremism Scale

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The present study aimed to develop and validate an indigenous scale to measure violent extremism beliefs in young adults. The present research was carried out in two studies. Study 1 aimed to develop scale and establish its factor structure. Study 2 was aimed at establishing psychometric properties. In study 1 Phase 1, a qualitative study comprising of focus group discussions with young adults ($N = 63$) age ranged between 18 to 29 ($M = 22.05$; $SD = 1.83$) and interviews with two religious scholars, one psychologist, one defense and strategic expert, and one law expert ($N = 5$) were conducted. The experts age ranged between 39 to 50 ($M = 44.80$; $SD = 4.65$). An initial item pool of 46 items was generated based on findings of qualitative study and literature review. Then to check the initial psychometric properties of the scale and face validity of items try out was conducted on a sample of youth ($N = 30$) age ranged between 16 to 25 ($M = 20.10$; $SD = 2.11$). In Phase 2 Exploratory Factor Analysis on a sample of youth ($N = 562$) with age range 16 to 25 ($M = 19.27$; $SD = 2.50$) was conducted which suggested two-factor solutions with fourteen items relating to Violence Justification for Ideology Defense, and eight items relating to Violence Justification for Ideology Promotion. Another independent study ($N = 514$) was carried out following exploratory factor analysis to confirm the factor structure of the developed scale. Findings confirmed the two-factor structure. Two factors were inter-correlated and reliable. Convergent validity of the scale was also established with moral disengagement scale and both scales showed a significant positive relationship. As a result, this study provides a sound measure of the important concept of violent extremism that can be empirically used to elucidate the generic phenomenon of violent extremism beliefs among youth.

Keywords: Violent Extremism, violence, ideology, beliefs ¹

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Introduction

Research on Violent Extremism (VE) is a growing field in psychology and related disciplines. This growing concern has been attributed to terrorism, and extremism around the globe (Borum, 201; Ferguson & McAuley, 2021) and particularly in Pakistan (Weinbaum, 2017). VE and other related forms of extremism and terrorism have caused an unblemished threat in form of strategic, social, psychological, religious, and political repercussions (Khan, 2015; Malik et al., 2015). VE is multifaceted as it may belong to various manifestations like radicalization, religious extremism, extremism, and terrorism. Despite the research and advancement in this field terms like radicalization, extremism, VE, and terrorism have been used interchangeably and defined poorly and incomprehensibly (Borum, 2011; Schmid, 2013), which abandons the likelihood of establishing a universal definition and approach to examine the phenomenon of VE. Given the grave importance and applicability to this field, researchers have been striving to conceptualize the phenomenon instead of focusing on robust empirical investigation (Borum, 2015). Hence, in the first place, it is imperative for researchers to understand and identify the components (e.g., beliefs) of VE that lead to violent acts (Schmid, 2013), and develop robust quantitative measures on VE and related concepts (Schuurman, 2018). Therefore, the present research intends to expand our understanding of the phenomena and develop a reliable and valid measure of VE.

Conceptualizing Violent Extremism

VE is a heterogeneous concept comprised of different ideologies and beliefs such as separatist or nationalist, far right, far left, specific issue-oriented, and religiously motivated extremism (Doosje et al., 2016; Gartenstein-Ross et al., 2023). However, ideologies (e.g., religious, political, ethnic, & nationalist) may not necessarily differ they may somewhat intersect (Doosje et al., 2016). The people holding these ideologies support the use of violence/power over opinion, homogeneity over heterogeneity, and authority over dialogue to attain collective goals than individual goals (Schmid, 2013). Understanding VE is not all about ideology and action, rather knowing about perspective, culture, and

context are of empirical importance. VE is a dynamic phenomenon studied at the individual, group, and societal levels. One of the challenges to psychological research among many is to investigate the diverse and complicated phenomenon of extremism within the multitude of contextual and sociocultural diversity (Borum, 2011; Ozer, 2020). At a larger scale VE is a group activity that traverse with cultural, religious, ethnic, social, and political context, hence violent beliefs are developed or reinforced whether at group or individual level according to one's socio-cultural context (Crenshaw, 2000). The interplay between the group, individual and society asserts how otherwise nonviolent individuals cross the threshold of extremist beliefs into violent actions (Bandura et al., 1996). Given the complexity of phenomenon it is imperative to understand how VE and its related terms are defined.

There are many definitions of VE in different contexts. In this context to understand VE more comprehensively it is necessary to first define extremism and violence and other related terms like radicalization, and extremism to gain clarity. According to Borum (2011) radicalization is defined as a process by which one develops extremist beliefs and ideologies. On the other hand, the process of radicalization has been conceptualized by Schmid (2013) as group and an individual process where diverse groups (e.g., political, religious, ethnic) and radical actors endorse intolerance, disagreement, reject dialogue, and use nonviolent coercion in various violent forms that leads towards VE. According to Coleman and Bartoli (2014) extremism is defined as "activities (beliefs, attitudes, feelings, actions, strategies) of a character far removed from the ordinary" (p. 2). It is generally acknowledged that when extremism involves violence or the support of violence, it becomes a serious issue that cannot be disregarded. Neumann (2011) defined VE as an ideology that contradicts societal values, and principles that supports that use of violence to further particular ideology, beliefs (political, religious, ethnic, racial). According to UNESCO (2017), "VE refers to the beliefs and actions of people who support or use violence to achieve ideological, religious, or political goals. This can include "terrorism and other forms of politically motivated violence". Corresponding to above mentioned explanations VE involves both ideology (belief) and behavioral intentions and action in some contexts. So, it is imperative to first understand VE in terms of action and belief or ideology that supports the use of violence as a behavior. As there might be a fair propensity of developing extremist beliefs without violent acts or with acts vice versa acts that support violence (Borum, 2011; Moskalenko & McCauley, 2009). Ideology promotes the acceptance

of violence as justified method in political change and causes to create violence-oriented subculture (Coolsaet, 2013).

Subsequently, based on the existing research (Zinchenko, 2014), VE is theorized as ideology (religious, ethnic, political or any other) that supports the use of violence with underlying mechanisms power, authority, intolerance, rigidity, and disagreement to attain certain goals at individual and group level. VE is conceptualized along two interrelated dimensions: (1) violence justification for ideology defense and (2) violence justification for ideology promotion. Within the conception of violence justification for ideology defense, it goes beyond extremist beliefs into the justified use of violence in protection of one's own and group's basic rights, values, tradition, and in promotion of ideology (religious, ethnic, political). The role of ideology as a collective belief to which group member identify is important in justifying violence when group is under perceived a real threat, encounter injustice and deprivation, where the ultimate task of the group is to defend one's ideology (Doosje et al., 2013; Zartman & Anstey, 2012), and to protect the values and existence of group (Atran, 2010). Another important element involved in violence justified ideology is revenge that reciprocates harm to those who assaulted one's group (Crenshaw, 2003; Kruglanski et al., 2014). Within the concept of violence justification for ideology promotion individuals and groups promote their viewpoint and ideology engaging in ideological and politically motivated violence to achieve their goals by disregarding other's rights (Neumann, 2010). These beliefs and intended actions are motivated by certain underlying socio cognitive mechanisms.

Research has identified potential mechanisms that incite groups and individuals from extremist beliefs toward the support of violent actions (McCauley & Moskalenko 2008). At individual level psychological research has highlighted (Sawyer & Hienz, 2017) personality, and at social level (Doosje et al., 2016; Webber & Kruglanski, 2018) the role of group in VE. The interplay between the group, individual and society, is supported by moral disengagement theory that asserts that how otherwise nonviolent individuals cross the threshold of extremist beliefs into violent actions (Bandura et al., 1996), According to research (Hellyer, 2008; Tajfel, 1979) vulnerable individuals who identify with groups (ethnic, religious, political) through the process of moral disengagement justify violence as means of tackling their perceived injustices and atrocities against their group (Pauwels, & Heylen, 2017) that incite them towards VE.

Rationale

VE is one of the important problems plaguing society (Borum, 2011). VE and other related forms of extremism and terrorism have caused a clear danger and threat in form of strategic, social, psychological, religious, and political costs around the world and in Pakistan (Ahmed & Jafri, 2020; Khan, 2015; Weinbaum, 2017). According to Institute for Economics and Peace (2022) Pakistan ranked 7th among 138 countries in terrorism that make Pakistan a pertinent context for studying the phenomenon of violent extremism and its underlying ideologies and beliefs.

According to research (Schuurman, 2018) robust quantitative measures on radicalization, extremism, and VE are oddly missing and should be the focus of researchers. Although many studies have been done around the world to develop measures, only a limited number of general measures relating to VE and other related phenomena have been developed such as Religious Extremist Ideology (Altemeyer & Hunsberger, 2004), Activism and Radicalization Intention (Moskalenko & McCauley, 2009); Violent Radicalization (Ozer & Bertelsen, 2018); Violent Extremist Risk Assessment (Pressman & Flockton, 2014); Militant Extremist Mindset (Stankov et al., 2011). However, these scales limit themselves to a particular aspect, cause (Grossman et al. 2020), construct (Altaf, 2002), or context (Ozer & Bertelsen, 2018) that cannot be extended or generalized to a larger population especially in Pakistani context.

In Pakistan research on VE is mostly done in context of armed conflict, sectarianism, poor governance, political instability, grievances among provinces, economic disparity, and related factors (Khan, 2015; 2014; Rais, 2011). The few studies that developed indigenous scales in Pakistan to study extremism are not comprehensive such as Extremism scale (Altaf, 2002) and extremism and violence risk identification (Hassan et al., 2021) in a manner they only tap few aspects of phenomenon. Subsequently, the gap identified in literature indicates that indigenous measures have focused on unrelated forms and approach with reference to risks, group, context, specific mind set, ideology, values, and beliefs. As mentioned above measures have used generic sense to gauge the construct. As VE has been a challenging phenomenon to conceptualize and operationalize, a variety of measures within this field are needed to capture the diversity and complexity for the population with diverse backgrounds. As a challenged term VE currently needs an empirical and scientific

foundation (Borum, 2015). One step forward to establishment of such a foundation is the development of reliable and valid measure with central aspects of VE in Pakistani context. In this study we have mainly focused on violent extremist beliefs rather than action component of VE.

Objectives of the study

1. Develop an indigenous scale to measure Violent Extremism.
2. To establish the psychometric properties and construct validity of the scale.

Methods

Scale development was carried out in two studies. Study 1 aimed to develop scale and establish its factor structure. Study 2 was aimed at establishing psychometric properties.

Study I

Study 1 was completed in 2 phases. In phase 1 an initial item pool was drawn from qualitative findings and literature review followed by review from subject matter experts (SMEs) for the selection of items. In next step to test the initial psychometric soundness and face validity of items try out was conducted on a sample of 30 young adults. In phase two Exploratory Factor Analysis (EFA) was done to establish the factor structure of the developed scale.

Phase 1: Item Pool Generation

Sample. In phase 1 an initial item pool was generated by conducting focused group discussions (FGDs) with 63 young adults whose age ranged between 18 to 29 ($M = 22.05$; $SD = 1.83$); and interviews with 5 professionals including two religious' scholars, a psychologist, a defense and strategic expert and a law expert with age range between 39 to 50 ($M = 44.80$; $SD = 4.65$). An initial pool of items was generated by tapping the basic component of VE. Items constructed were based on the content of themes extracted from the responses of open-ended questions asked in FGDs and interviews. Some items were developed based on literature. Initially, a pool of 46 items was developed.

Procedure. A separate guide based on literature was developed to conduct interviews and FGDs in the Urdu language. Example questions were: In your opinion what is VE? In your opinion what are the conditions in real life in which VE is justifiable? Thematic analysis was used to analyze the responses to the open-ended question following the guidelines of Braun and Clarke (2020). Analysis was done in the following steps: (1) familiarization with the data (2) generating initial codes (3) generating themes (4) reviewing potential themes (5) defining and naming theme (6)

producing the report. Since our target participants read and understand Urdu as the national language, the questionnaire was developed in the Urdu language. However, for the outreach and readability of a wider context, an equivalent form of the English version of the scale was established with the consultation of both English and Urdu linguistic experts by following the procedure of forward and back-translation. So based on qualitative findings and literature in phase 1 pool of items was generated in the Urdu language.

Initial form of violent extremism scale. A total of 46 items were generated in initial form. All the initial items were critically reviewed by the authors for comprehension, cultural relevance and to avoid any ambiguity and redundancy. For further review and content validity of items an initial form was given to a committee of SMEs. SMEs consisted of two assistant professors and a lecturer of psychology, and a Ph.D. Scholar to assess the content validity of items in the initial form of the violent extremism scale. The items were reviewed to ensure that they were clear, concise, readable, distinct, comprehensive, culturally relevant, and reflective of the scale's purpose as suggested by Worthington and Whittaker (2006). SMEs were selected based on their expertise in psychometrics and extremism research. The items identified as double barreled, overlapping, less comprehensive and vague were excluded. After review of the committee the items in initial item pool were reduced to 33 items.

According to Babakus and Mangold (1992), a five-point response format improves response quality, response rate and reduce the frustration level of respondents. That's why for this scale a five-point likert type response set was decided on response format ranging from *strongly disagree* to *strongly agree*. Likert-type scales are used to measure items consisting of beliefs, behaviors, and attitudes.

Try Out. The initial form of the developed scale was pilot tested on a sample of $N = 30$ youth with age range between 16-25 ($M = 20.10$; $SD = 2.11$), to check the item difficulty, ambiguities, and the wording of items. Following the feedback minor changes were made on some items, and others were removed. Finally, thirty three items were retained for exploratory factor analysis.

Phase 2: Exploratory Factor Analysis (EFA).

To explore factor structure of scale principal component factor analysis by using maximum likelihood (ML) extraction with promax

rotation, presuming that the factors correlate with each other. The preliminary analysis of item-total correlation was carried out before running EFA to check whether items correlate with the total scores sample $N = 562$ of young adults. Item total correlation assists in the selection of rotation, our results showed a significant correlation of items with total scores, which guided us to choose oblimin (promax) rotation. According to Schmitt (2011) the oblique rotation method is used because it tends to provide simple statistical structure and convincing results.

Sample. This study consisted of a sample ($N = 562$) of students with age range from 16 to 25 ($M = 19.27$; $SD = 2.50$). Sample was representative of both male ($n = 273$), and female ($n = 289$). The data were collected using convenient sampling from madaaris, schools, colleges, and universities from both private and government sector across Pakistan. Respondents belonged from Punjab ($n = 196$), Sindh ($n = 10$), Khyber Pakhtunkhwa ($n = 120$), Baluchistan ($n = 18$), Azad Jammu and Kashmir ($n = 220$). The heterogeneity of the sample covering all provincial territories adds to the generalizability of the findings.

Measures. Data were collected with 33 items of the initial form of violent extremism scale, moral disengagement scale (MDS), and demographic information (gender, age, province, and education) sheet. The response format for the initial form of violent extremism scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) continuum. The composite score is obtained by summing up all the responses. An initial form, violent extremism tapping different mechanisms was developed on basis of literature and qualitative findings. In overall violent extremism scale the item consisted of the basic components' ideology, beliefs, mindset, and the support for justified use of violence. The items tapped people's readiness to resort to use of violence, disagreement/intolerance towards other's beliefs and ideology, promotion, and protection of one's ideology, need for revenge, and protection of basic rights of one's group. The MDS was used to establish the convergent validity of violent extremism scale. It consists of 32 items developed by Bandura et al. (1996). The multifaceted scale assesses proneness to moral disengagement under eight mechanisms. There is no subscale in MDS. An overall score is created by summing the responses to the set of items to provide the composite measure of moral disengagement. The response categories for MDS range from 1 (*strongly disagree*) to 5 (*strongly agree*). The alpha reliability coefficient for this measure was $\alpha = .82$ (Bandura et al., 1996).

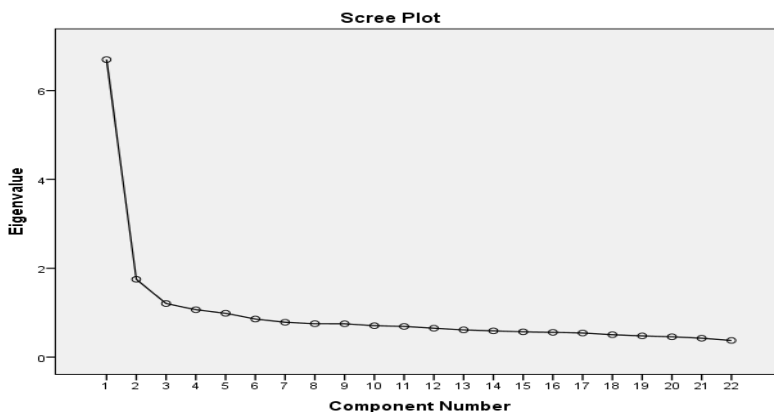
In the present study the MDS Urdu version is used by authors.

Procedure. The present study was carried out through survey research. Data were collected by using convenience sampling. Before visiting educational institutes, data collection permission letter was obtained from National Institute of psychology. Formal permissions prior to data collection were obtained from the head of respective institutes. Potential participants for the research were briefed about the nature and aims of research. Participants were also briefed about the confidentiality of data, voluntary participation, right to quit, right to hold back any information that they don't want to share and anonymity. Based on the nature of research the rapport was built by the researcher with participants. Researcher was present all time during the data collection process in order to facilitate the participants. A questionnaire pack consisting of survey information sheet, consent form, demographic sheet, and questionnaire was administered on participants who showed their consent. The data were collected on campus and online. Since the official language of Pakistan is Urdu the violent extremism scale was indigenously developed in Urdu language.

Results. The appropriateness of sample size in terms of data was calculated by the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy. According to Kaiser (1974), the acceptable range of the KMO test is above .60, while our results showed an excellent KMO value of .92. The value of the Bartlett test of sphericity ($\chi^2 (276) = 3845.59, p < .00$), was also significant for this scale. Scree plot suggested a two-factor solution with eigen value $> .1$ (see figure 1). Figure 1 shows scree plot which clearly suggests a two-factor solution for VES.

Figure 1.

Scree Plot Shows Factor Solution of VES (N = 562)



In total, the two-factor solution accounted for 38.40 % variance. Factor one accounted for 30.44 % variance. Factor two accounted for a total of 7.95 % variance. Item loadings, eigenvalues, and variance percentage explained by the factors are mentioned in Table 1. Twenty-two out of 33 items were retained after EFA with loadings ($> .30$). According to Field (2005), the criteria for retaining items for the factor loading is $\geq .30$. Thus, the items having loading $< .30$ and items with cross-loadings were removed. Factor solution was analyzed based on overall content and face validity of items loaded on each factor having loadings ($> .30$).

The two-factor solution was retained on the basis of SMEs judgment, variance explained, and the relevance of the content with the factor. After doing principal component factor analysis the extracted factors were given for appropriate labels to eight Ph.D. scholars and four assistant professors of psychology. The two factors were labeled as (1) *Violence Justification for Ideology Defense* consisting of 14 items; and (2) *Violence Justification for Ideology Promotion* consisting of 8 items (see table 1 for detailed item description). Factor one taps mechanisms of retaliation in the context of atrocities an individual or a group faces, defense of one's basic rights and values, and protection of one's ideology. Factor two measures the aspect related to justified use of violence in the promotion of one viewpoint, beliefs and ideology and was labeled as violence justification for ideology promotion. The context encompassed religious, political, and ethnic ideology, individual, group, and government authorities. Twenty-two items were finalized for the violent extremism scale with response categories ranging from *1 strongly disagree* to *5 strongly agree*. The original scale was developed in the Urdu language however for the utility of foreign researchers a psychometrically equivalent form of the English version is given in table 1.

Table 1

Factor Structure of Violent Extremism Scale (VES) With Promax Rotation (N = 562).

Sr. no	Item no	Items	Factor 1	Factor 2
1	33	If someone insults (blasphemes) my religion I will endorse killing him/her.	.78	-.19

2	15	I will support participating in a protest for any cruelty or injustice against my group (religious, ideological, political, ethnic), even if that protest is violent.	.70	-.04
3	30	If someone spreads propaganda against our religion taking up arms against them is the only solution.	.68	-.09
4	10	If my group (political, racial, religious, ideological) has a danger from government institute (police or security forces) I will endorse taking up arms against them.	.68	-.08
5	11	I will endorse using violence for obtaining my rights and safety.	.65	.05
6	13	There is no harm in killing someone for blasphemy/ blaspheming religion.	.64	-.04
7	27	If someone spreads propaganda against my religious beliefs, I will favor vandalizing in protest against them.	.60	.04
8	17	There is no harm if you have to be violent OR resorting to violence to protect your social, religious traditions and values.	.57	.17
9	3	There is no harm if you have to be violent OR resorting to violence to protect your group from persecution/atrocities.	.52	.04
10	9	If you face extreme pressure from someone then there is no harm in taking up weapon against him /her.	.50	.02
11	26	The only solution to get rid of a bad government is violent protest.	.50	.13
12	6	If government institutes (police or security forces) do injustice to me, I will favor taking up arms against them.	.45	.10

13	12	I will endorse an organization which stand for/fights for my group's (religious, ideological, political, ethnic) basic rights whether that organization break/violates the laws.	.43	.20
14	8	If someone spreads propaganda against my group, I will support those who beat them up.	.41	.29
15	31	There is no harm in the exploitation of others basic rights to promote your political ideologies.	-.13	.78
16	32	There is no harm in resorting to violence to promote your political ideology.	-.05	.72
17	23	There is no harm to be violent /even resorting to violence if it is to make people understand your point of view.	.02	.70
18	28	There is no harm in vandalizing protesting to get your political demands met.	-.05	.62
19	19	There is no harm in vandalizing/protesting for acquisition/promotion of your ideological goals.	.05	.59
20	14	There is no harm in giving provocative statements against others to promote your political narrative/ideology.	.01	.56
21	4	There is no harm in pressurizing others to promote one's ideology (personal, religious, political, any other).	.05	.46
22	2	There is no harm in giving provocative statement against other religions/sects to promote your religious beliefs.	.17	.33

Eigen Value	6.69	1.75
Percentage of explained variance	30.44	30.44
Accumulated percentage of variance	7.95	38.40

Note. Boldface numbers indicate the loadings of factor 1 and factor 2. This scale was originally developed in Urdu in Table 1 an equivalent form of English version of the original scale is given.

To establish the convergent validity of the VES, and its subscales with MDS, Pearson Product Moment Correlation is computed.

Table 2

Correlations Among Violent Extremism Scale its Subscales, and Moral Disengagement Scale (N = 562)

Sr. No	Variables	<i>M</i>	<i>SD</i>	α	1	2	3	4
1	VES	59.85	16.63	.88	-			
2	VJID	40.66	12.05	.87	.91**	-		
3	VJIP	19.19	6.37	.76	.83**	.59**	-	
4	MDS	76.99	15.69	.84	.59**	.54**	.52**	-

Note. VES = Violent Extremism Scale; VJID = Violence Justification for Ideology Defense; VJIP = Violence Justification for Ideology Promotion; MDS = Moral Disengagement Scale

** $p < .01$.

Table 2 shows the reliability of all scales is in an acceptable range. The violent extremism scale composite and its subscales show a significant positive correlation with moral disengagement scale. A significant positive relationship between the violent extremism scale and its subscales indicates adequate construct validity of newly constructed scale. This indicates that as the level of moral disengagement increases the propensity of violent extremism also increases. Hence, violent extremism scale confirms convergent validity with moral disengagement scale.

Study II

Study II was carried out to establish psychometric properties through confirmatory factor analysis (CFA).

Sample. For construct validity of the developed scale, an independent study on a sample of students with different ethnic backgrounds from across Pakistan was conducted. Sample consisted of young adults ($N = 514$), with age range between 16 to 25 ($M = 20.33$; $SD = 2.06$), from universities and colleges. Sample was representative of both males ($n = 228$), and females ($n = 286$). Sample belonged to different provincial backgrounds respectively, Punjab ($n = 268$), Sindh ($n = 32$), Khyber Pukhtun Khwa ($n = 86$), Baluchistan ($n = 36$), Azad Jammu and Kashmir ($n = 77$), and Gilgit Baltistan ($n = 15$). The heterogeneity of the sample covering all provincial backgrounds adds to the generalizability of the findings.

Procedure. The same procedure was followed for this study as used in study one.

Results

To establish psychometric properties and scale's factor structure Confirmatory Factor Analysis was conducted in AMOS 21 version with maximum likelihood estimates. To check the goodness of fit for the model various fit indices including relative/normed chi-square (χ^2/df), chi-square (χ^2), incremental fit index (IFI), goodness of fit index (GFI), and comparative fit index (CFI), and *root* mean square error of approximation (RMSEA) were tested. Research suggests the value of CFI, IFI, and GFI ranges between 0 to 1, values ≥ 0.90 , indicates good fit to the model (Hooper et al., 2008). To check whether models accurately fit in the population Chi-square statistics is calculated (Brown, 2006). According to research the acceptable range for RMSEA is $\leq .05$, and for standardized root mean square residual (SRMR) is ≤ 0.08 (Kline, 2012), for good fit of data.

Table 3

Model fit indices for Violent Extremism Scale (N = 514)

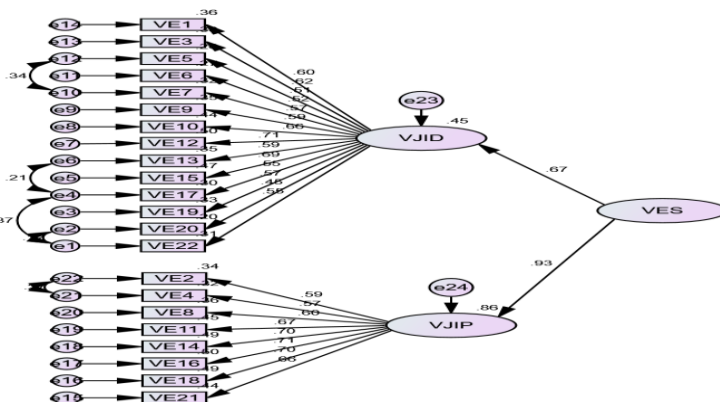
Model	χ^2	$\Delta\chi^2$	GFI	IFI	CFI	SRMR	RMSEA
M1	788.135 (208)		.87	.85	.85	.05	.07
	$p = .00$						
M2	419.04 (198)	369.09	.93	.94	.94	.04	.04
	$p = .00$						

Note. M1= Default Model for (VES); M2 = Model with error covariance; GFI= Goodness of fit index; IFI = Incremental Fit; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square; RMSEA = Root Mean Square Error of Approximation.

Table 3 shows fit indices for Violent Extremism Scale on a sample of (N = 514) young adults. The default Model 1 did not fit well to the data. To achieve an acceptable range of fit indices error covariances are added in model 2. Model 2 shows all fit indices are in the normal range and the overall model is a good fit to the data. Figure 2 shows a path diagram of the VES factor structure along with factor loadings. The factor structure of scale confirmed the model fit in the current study as mentioned in exploratory factor analysis (for details see table 3). In this model, the two factors of VES were loaded onto a latent factor of Violent extremism. Factor lodgings (λ .45 - .71) fall in the acceptable range along with square multiple correlations (SMCs). SMCs ranged from (.20 - .50).

Figure 2.

Path Diagram of Violent Extremism Scale Factor Structure Along With two Subscales



Discussion

The present study aimed to develop psychometrically sound quantitative measure. To achieve the objectives of the present research, a qualitative study was conducted with participants from diverse backgrounds including young adults and professionals. It is indicated that VE consists of both ideology (religious, ethnic, political, or any other) and intended action (e.g., violence) with underlying mechanisms of power, authority, intolerance towards out group, and disagreement of opinions. Early research also suggests that VE is a product of both ideology and action (Zinchenko, 2014), where violence is considered and supported as the legitimate way to obtain one's goals (Kruglanski et al., 2014). However, in our research we have focused on beliefs in the developed scale.

Our findings are consistent with those of early research that suggests people justify use of violence based on certain ideology at individual and group level (Doosje et al., 2013; Zartman & Anstey, 2012). One of the main objectives of the present study was to develop a reliable and valid scale of VE with focus on beliefs. Exploratory factor analysis with promax rotation for VE scale extracted two factor solutions. The first subscale consists of 14 items and was labeled as "Violence Justification for Ideology Defense." This factor probes the justifications for resorting to violence, such as defending one's rights, protecting one's group members from harm, exacting revenge, and preserving one's ideology (religious, political or ethnic). Violence Justification for Ideology Promotion subscale comprises eight items corresponding to justified use of violence and power to promote ideology, and beliefs to achieve goals. These findings are in line with previous research that asserts that people use violence to defend one's ideology (Zartman & Anstey, 2012), to take revenge to reciprocate harm confronted by one's group (Crenshaw, 2003; Kruglanski et al., 2014), to protect existence and values of group (Atran, 2010).

Both subscales and composite scale show adequate internal consistency. Furthermore, inter scale and subscales show significant positive correlation, suggesting that both factors pertain to an overall VE scale. Convergent validity of scale was established with moral disengagement, it showed positive relationship between scales as expected. The mechanisms of moral disengagement hold significant value in VE when individuals disengage from ethical standards and personal agency that forbid violence and breaking laws. Findings of present study

show positive relationship of scales and subscales of VE with moral disengagement. This finding is consistent with early research that indicates a positive relationship between moral disengagement and VE (Bandura et al., 1996; Blanco et al., 2020).

The second objective of the present study was to confirm the factor structure of violent extremism scale. To achieve this objective an independent study was conducted, the findings confirmed composite factor structure consisting of two subscales of violent extremism scale. Consequently, violent extremism scale confirmed good fit to the data by tapping all the aspect representative of construct. In Pakistan, numerous studies on extremism, violence, and terrorism have been conducted, especially since 2001. The majority of these studies (Javaid, 2011; Pressman & Flockton, 2014) aimed to understand extremism and terrorism within the context of other cultures. Validating the phenomenon of violent extremism in indigenous context was one of the primary aim of this study.

Implications

This study is unique in a manner that it used an in-depth qualitative method with a heterogeneous sample to understand the phenomenon and develop a robust quantitative measure. The heterogeneity of the context covering all provincial territories adds to the generalizability of the findings. The understanding of the phenomenon highlights the justified use of violence and power to gain one's personal and ideological goals in religious, political and ethnic context. The previous studies on the measures of extremism and related outcomes are based on just one aspect like religious extremism (Altemeyer & Hunsberger, 2004) and some are mixed up with only risk factors (Pressman & Flockton, 2014). Thus, this research is unique in a manner that it taps the holistic phenomenon of violent extremism that it could help understand the beliefs in young adults. This study will help develop a better understanding of engaging youth and stakeholders including government, law enforcement agencies, academicians, and professionals to build a better community against VE by developing robust strategies and interventions.

Limitations and suggestions

The present research contains a few imperative limitations which can direct prospects for potential avenues of future research. First this study has a limitation in that it wasn't developed and validated on criminals and persons who have been involved in extremist activities or been

working for such organizations. Future researches can also validate this scales factor structure on non-student sample other than students. Prospective research can take this suggestion into consideration to make this measure more generalizable. Empirically, this study also adds to the theory and literature of psychological research. Another limitation is that this study did not include the risk factors in association with the developed scale, future researchers can empirically examine the potential risk factors as well.

Conclusion

The present study aimed at developing an indigenous scale to measure VE and to understand the phenomenon. The review of the literature and qualitative finding in the process of scale development indicates that there is no fixed component that conceptualizes VE rather it underly multiple mechanisms, therefore this study suggests that VE should be conceptualized and considered in a specific context. Findings suggested a two-factor solution of VE scale with adequate internal consistency. VE also confirmed its factor structure on an independent sample that shows that the developed scale is a psychometrically reliable and valid outcome measure.

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