



RESEARCH PAPER

Cross Cultural Translation and Validation of the Investment Model Scale for Married Adults of Pakistan

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ABSTRACT

The current study aimed at cross validating one of the most widely used scales for investigation of romantic relationships among married individuals. From past few decades, interest in understanding the contributing factors in success and failure of marriage has increased. For said purpose culturally appropriate tool was required. Investment Model Scale measures romantic relationships in four sub-dimensions: relationship satisfaction, investment size, quality of alternatives, and commitment. Urdu Translated 22 global items were administered on 298 married men and women from five provincial capitals of Pakistan. Confirmatory Factor analysis with promax rotation was performed. Results confirmed the four-factor structure with the omission of items 18, 19, and 20 because of inadequate factor loadings. Subsequently, 19 items Urdu-translated version of IMS was found to be psychometrically sound tool with semantic, idiomatic, contextual, and linguistic appropriateness as original English version.

Keywords: Confirmatory Factor Analysis, Investment Model Scale, Married Individuals, Urdu Version

Introduction

From past many decades, both Western and Asian societies are facing a social shift where inhibition to commit in the marriage contract and inclination toward divorce is high, resulting in a two-fold increase in the divorce rate (Ortiz-Ospina & Roser, 2020). Researchers have been investigating the marriage institute and the determinants playing role in its success and failure. Marriage is a sacred bond between two people where they rely emotionally and physically on each other by creating a familial environment with a sense of shared responsibility (Nunes et al., 2022). In this context, the most crucial is individual's expectations from partner related to affection, devotion, emotional support, and agreement to each other's social and physical needs (Delatorre & Wagner, 2020). Any interpersonal friction among the partners will ultimately affect their psychophysical and social functioning resulting in disturbance of family functioning and ending in divorce (Muzaffar, et al., 2018; Bradbury et al., 2000; Kanter & Proulx, 2021; Qadir et al., 2013; Yoo, 2020).

Literature Review

Researchers have investigated the antecedents of romantic relationship success and failure. Empirical evidence supported the long-term impact of interpersonal frictions on psychophysical functioning and partner commitment (Kanter & Proulx, 2021; Qadir et al., 2013). As a result, marital satisfaction does not remain the same throughout ages and drift through high and lows in a subsequent manner where satisfaction is high in the early years of marriage, declining in between when children are growing and focus has shifted to their development and needs, and again rising in older age when children grow and moved out of the house and both partners have now each other to rely on (Stephen & Raj, 2014).

Pakistan is not different than other Asian countries and faces the same pattern with the difference that most of the time children are living in an extended family with parents but are busy in their own lives. Just like the global increase, Pakistan is also seeing an increase in the divorce rate but still, it is far lower than even one percent (GallupPak, 2019). Literature supported that if a person feels happy in a relationship means it will last longer. This mere longevity of a relationship is not that simple, therefore the shift has been seen from investigating just satisfaction and well-being of partners to determinants such as love, affection, emotional support, financial support, as well as overall satisfaction (Rusbult et al, 1998). Many researchers (Arif & Fatima, 2015; Qadir et al., 2013; Zaman & Shehzad, 2018) have investigated the underlying reason for intact marriage institute in Pakistan, even though the reason for its dissolution seems apparent.

Nothing can be proven appropriately if that starts with not culturally relevant and representative measures. Nowadays, researchers believe in the validation of any theoretical concept from a diverse population across the globe. The trend has been shifted to understand people from their cultural standpoint and in their native language (Gjersing et al, 2010). Therefore, the need for the most valid tool for understating culturally significant antecedents of romantic relationships has also been raised. Unfortunately, empirical research based on antecedents related to relationship commitment and satisfaction from Pakistan is scarce (Hayee & Kamal, 2022; Khan et al., 2022). One of the most researched and relevant models was found to be Investment Model (Rusbult, 1980). According to this model, the strongest antecedent that leads to relationship success and failure is the commitment level among partners (Rusbult et al, 2012; VanderDrift et al., 2013). This model has cross-culturally proven as valid and reliable in the context of romantic relationships including both married and cohabiting ones (Le & Agnew 2003; Rodrigues & Lopes, 2013).

The Investment Model was originally conceptualized by Rusbult (1980, 1983, 1998). It emerged with the notion that commitment in any relationship is fueled by three independent antecedents that are: investment size, quality of alternatives, and relationship satisfaction. It further elaborated that there are positives and negatives involved in tying someone to a relationship, the appealing dynamics of a relationship, along with the efforts both partners believed that they have put in to build this relationship, along with the availability of other better options as a partner. The investment model developed from the interdependence theory, which resides on the associated factors of interdependence proposed by Kelley and Thibaut (1978). The level of dependence is based on the significance of a romantic partner in one's survival. This dependence is defined in terms of need that comprises the availability of alternatives to fulfill that need, the comparison of those alternatives, nature of investment in terms of time, emotions, and finances to include a few. Further, this theory suggests that the nature of dependence is so strong that the person wants to continue with the given partner even though sometimes quality alternatives are available (Rusbult et al, 1998).

The theoretical underpinning in the Investment model has been tested and proven empirically by individual and meta-analytical studies, supporting its 40 to 60 percent variation in a commitment of relationship and success and failure of it (Le & Agnew, 2003; Le et al., 2010; VanderDrift et al., 2013). Moreover, the gender of partners contributed almost none to this variation. Whereas in Pakistani culture the commitment in any relationship resides more on a female partner (Hayee & Kama, 2022; Qadir et al., 2013). Literature has also pointed out that this expectation has resulted in feelings of dissatisfaction among women more than men (Jackson et al., 2014). Furthermore, low-income individuals were found to be more hostile toward their partner and engage in marital conflicts more often than financially stable ones (Capistrant et al., 2020; Iqbal et al., 2019; Masarik et al., 2016; Qadir et al., 2013). Empirically once couples have children their love and affection shift from partner to children, ultimately resulting in lowering marital satisfaction (Twenge et al., 2003). Therefore, marital satisfaction changes throughout life based on various

psychophysical and social aspects (Nunes et al., 2022; Stephen & Raj, 2014). This intrigued the notion that those patriarchal societies burden women for the success of a relationship and stigmatized them for its failure, what would be the determinants, and how both genders value these. Moreover, children raised by such conflicting parents and family environments will be causing the same problems in the future (Christopher et al., 2015; Finger et al., 2009)

Investment Model Scale (IMS; Rusbult et al., 1998) was found to be a well-researched and validated tool across many cultures. As relationship studies have expanded globally for supporting evidence, it is inevitable to contribute in the context of Asian culture. Pakistan as a developing country is different from other Asian societies as dealing with the dynamic situation of economic instability due to COVID-19, political upsurge (Pakistan Ministry of Finance, 2022), highest need for survival, more than 95 percent Muslims, and the official religion of country to be Islam (Hackett et al., 2012), and the strong cultural cohesiveness irrespective of religious values (Gelfand et al., 2011), to name a few. According to Gelfand and colleagues (2011), it is culturally prohibited to show affection publicly and low tolerance for disregarding cultural norms, and divorce is one of them. Summing up, cultural differences in Western societies and even among other Asian societies in comparison to Pakistan can ultimately affect family ties and romantic relationships (Iqbal et al., 2019; Qadir et al., 2013; Bilal & Rasool, 2020; Ayub & Iqbal, 2022).

Researchers have found different dimensional models in the context of marital satisfaction, few (Goldfarb & Trudel, 2019) believed it to be unidimensional whereas others consider it to be multifaceted (Schumm et al., 1979; Rusbult et al., 1998). Therefore, cross-cultural validation of such notions requires understanding the factors that are similar or different based on cultural practices (Schwartz, 2014; VanderDrift et al., 2013). The current study was designed to investigate the antecedents defined by the investment model in terms of romantic relationships. Pakistan belonging to a specific cultural and religious connotation gives favors to the institution of marriage and so forth cohabiting relationships are strictly prohibited. So current study focused on understanding these contributing factors for failure and success of the romantic relationship in the context of married individuals.

Materials and Methods

Investment Model Scale

IMS is a 29-item self-report measure developed by Rusbult et al. (1998) to measure relationship investment on four sub-factors that are relationship satisfaction, quality of alternatives, investment size, and commitment level. It has both facet and global items where facet items are mainly examples of relationships, and there to facilitate the participants for answering global items. IMS has Likert-type response category ranging from 0 to 8 where 0 represents 'Do not Agree at all', 8 as 'Completely Agree', and 4 as 'Agree somewhat'. The complete range of numbers is represented to participants for selection of their responses where numbers 1 to 3 show disagreement level and 5 to 7 show agreement level. As per the authors, global items are equally reliable to be used separately for the investigation of relationship investment. The IMS is a highly reliable and valid scale used in various studies for the investigation of relationship investment with alpha ranging from 0.79 to 0.95 (Rodrigues & Lopes, 2013).

Cultural Adaptation and Translation in Urdu

For the translation and adaptation of 22 global items of the IMS, first and foremost step was to evaluate the cultural sensitivity by Subject Matter Experts. For said purpose, three experts from the field were engaged. The inclusion of odd number of experts in every step was based on the consensual agreement of the majority. After careful evaluation, it was highlighted by experts that the term 'Partner' might create a defensive stance as people might perceive it in terms of romantic relationships including dating and other relationships

of sorts that are not culturally acceptable; so, this term should be replaced with 'Spouse' for fulfilling the study criteria as proposed. After scrutiny and adaptation of the IMS for any culturally sensitive term, it was then translated into Urdu by following Borsa et al. (2012) approach. In their approach instruments need to be translated into a new language by synthesizing at least two versions based on semantic, idiomatic, experiential, as well as the conceptual equivalence of the translated items. After this, both versions were evaluated by experts and the first version of the final translated instrument was ready to be tested on the target population.

For the comprehension of translated version by target the population 5 couples were engaged in the process. The sole purpose is to evaluate the understanding and clarity of the items without administering any statistical analysis. The respondents were allowed to read the translated items and provided explanations if needed. In case of any ambiguity, at the end of reading the complete Urdu version, they were provided with original English items for conceptual clarity and better suggestion for replacements. Further, discussions were generated on the conceptual clarity of items to eradicate any possible changes and to achieve the most suitable version.

After this back translation of the final first version was done by three bilingual experts to follow the application of semantic and idiomatic adjustments (Sireci et al, 2006). These experts were not involved in any of the translation processes before (Gudmundsson, 2009). They were briefed to evaluate the conceptual equivalence of the translated instrument following Oliveira and Bandeira's (2011) approach. Five subject matter experts were again approached in a committee meeting, the final back translation was evaluated conceptually.

After approval of the Back translation from original author, pilot testing was done as the final and foremost step to get the translated version for validation. The Urdu-translated version was administered on 14 Urdu-speaking natives to assess the face validity. Further inclusion was based on a minimum one year of marriage. Both married men and women from varied socio-economic statuses were approached. Feedback from these participants was noted down for further clarity on the translated Urdu version. Responses of these participants were not included in the later analysis of the study. The participants approved of the language adequacy of the Urdu-translated version and found it to be appropriately conveying desired meanings. When no further changes were required, the final version proceeded to the next step that was validation.

Participants for Factorial Structure

Following the approach of Borsa et al. (2012), the next step was to determine the factorial structure. Data for the current validation study was collected from five provincial capitals of Pakistan including Karachi, Islamabad, Lahore, Peshawar, and Gilgit. Data was gathered from June 2022 to December 2022. For recruitment of participants, married individuals were approached in their work settings, academic institutes, shopping malls, restaurants, as well as homes. Participants were briefed about the nature of the study, and the importance of their contribution with the right to refuse and withdraw participation. They were further briefed on the anonymity and confidentiality measures to ensure the security of their provided information. No financial benefit was provided for participation. Among the targeted population, few people refused, and the majority agreed to participate voluntarily. It took 5 to 10 minutes to complete the provided form along with demographic details. In the end participants were thanked for participation. The email contact of the researcher was provided for further correspondence if needed.

Participants and Sample Size

Adult married participants above the age of 18 years (N=298) participated in the current study. Any participant having marital years with the current partner below one-year, prior psychiatric illness history, severe chronic medical illness, and inability to understand the language of Urdu version were excluded from the sample. According to the approach of Lai et al. (2013), against each item, at least 10 responses should be present for suitable analysis. The IMS has 22 items, so the proposed sample size was 220. However, almost 300 participants were recruited randomly and, in the end, 298 were retained after scrutiny of data for missing information.

Among these 152 were Men (51%) and 146 were Women (49%). The sample comprised participants from varied socio-economic statuses, professions, and educational backgrounds. Where the education level of participants and spouses ranged from Intermediate/A-levels to PhD, even including doctors and engineers. Further details of sample characteristics are shown in Table 1.

Table 1
Demographic Characteristics of the Sample (N =298)

Variables	<i>f</i>	%
Gender of Participant		
Men	152	51.0
Women	146	49.0
Age of Participant in years		
Young Adults (19-40)	236	79.2
Middle Adults (41-65)	60	20.1
Older Adults (65+)	2	0.7
Marital Decision		
Love Marriage	129	43.3
Arranged Marriage	169	56.7
Age at Marriage in years		
18-25	130	43.6
26-30	137	46.0
31-35	31	10.4
Marital Years		
0 to 5	97	32.6
6 to 10	97	32.6
11 to 15	42	14.1
16 to 20	40	13.4
21 and above	22	7.4
Family System		
Nuclear	137	46.0
Joint	161	54.0
Number of Children		
None	65	21.8
One	58	19.5
Two	86	28.9
Three	61	20.5
Four or More	28	9.4

Statistical Analysis

For analysis, IBM SPSS version 20 was used. For normality analysis skewness and kurtosis was performed. Results indicated that the values of both skewness and kurtosis were in acceptable range of ± 2 (George & Mallery, 2010) therefore parametric tests were performed. Exploratory and Confirmatory factor analysis was performed on data for model testing. Eigenvalues above 0.7 as proposed good by Field (2009) were retained for the contribution of respective factor. Internal consistency of test scores was determined through

Cronbach alpha. Alpha values above 0.7 were considered as acceptable, 0.8 and 0.9 as good and excellent respectively (George, 2003).

Results and Discussion

Married individuals participated in the current study. The mean age of the male and female participants was 36.78 (SD = 9.85) and 34.00 (SD = 6.15) respectively. The sample comprised of participants from varied socio-economic status, professions, and educational background. Where education level of participants and spouse ranged from Intermediate/A-levels to PhD, even including doctor and engineers. Cronbach alpha values were calculated for all items as proposed by original author of English version without removal of any item. Results indicated high reliability when analyzed for the complete IMS ($\alpha = 0.70$) as well as its sub-scales that are relationship satisfaction ($\alpha = 0.94$), quality of alternatives ($\alpha = 0.86$), investment size ($\alpha = 0.87$), and commitment level ($\alpha = 0.65$).

Confirmatory Factor Analysis

Confirmatory factor analysis with varimax rotation was performed with 22 items to analyze the factorial structure that indicated that model came out as a bad fit as indices indicated ($\chi^2 = 7234.38$, $p = 0.001$, CFI = 0.88, RMSEA = 0.12, PCLOSE = 0.001). Item number 18 and 19 had factor loadings less than 0.30 on all factors. Whereas item number 20 was loading on both commitment level and satisfaction factor. For all three items SMEs were approached and it was decided that after translation item 20 'I feel very attached to our relationship, very strongly linked to my partner' (میں اپنے رشتے سے بہت زیادہ جڑا ہوا محسوس کرتا) (ہوں یعنی اپنے شوہر/بیوی سے بہت مضبوط تعلق۔) appeared to be loaded on both factors. Further, SMEs evaluated that translation of item in Urdu was equivalent. After consultation with original author, these three items were dropped and again CFA was performed on remaining 19 items. The analysis indicated a better fit model without any modification indices (Kim & Kim, 2018) as shown in Table 2. Further, model was again analyzed with modification indices, and it represented best fit model for 9 items of Urdu version with four factors as proposed for English version. by the original author. RMSEA value is in acceptable range (Kim et al., 2016). The goodness of fit indices and factor loadings of all the items obtained through CFA are given in Table 2 and 3 respectively.

Table 2
Confirmatory Factor Analysis Showing Indices of Model Fit for Investment Model Scale Urdu (N = 298)

Model	χ^2	Df	p	CMIN/df	Fit Indices			
					CFI	NFI	TLI	RMSEA
Model-1 Second Order CFA (19 Items-Without Error Covariances)								
	934.84	146	.000	6.40	.89	.87	.87	.10
Model- 2 Second Order CFA (19 Items-With Error Covariances)								
	489.44	141	.000	3.47	.95	.93	.94	.04

Note. CFI = Comparative Fit Index, NFI = Non-Normed Fit Index, TLI = Tucker Lewis Index, RMSEA = Root Mean Square Error of Approximation

Table 3
Factor Loadings (Standardized Regression Weights) for Four-Factor of IMS Urdu (N=298)

Item No.	Factors			
	Relationship Satisfaction	Quality of Alternatives	Investment Size	Commitment Level
1	.86			
2	.82			
3	.93			
4	.95			
5	.70			
6		.44		

7				.43
8				.45
9				.45
10				.66
11				.29
12				.99
13				.99
14				.84
15				.42
16				.61
17				.51
21				.99
22				.98
Cronbach's Alpha	0.94	0.86	0.87	0.95

The Table demonstrated that factor loadings for all the retained items are above .30 indicating the good representation of construct (Field, 2009) with the 19 items of IMS Urdu translated version. Furthermore, Cronbach's Alpha reliability of commitment level sub-scale and complete IMS increased to 0.95, and 0.82 respectively indicating high reliability. Figure 1 shows the model along with the factor loadings of retained factor structure.

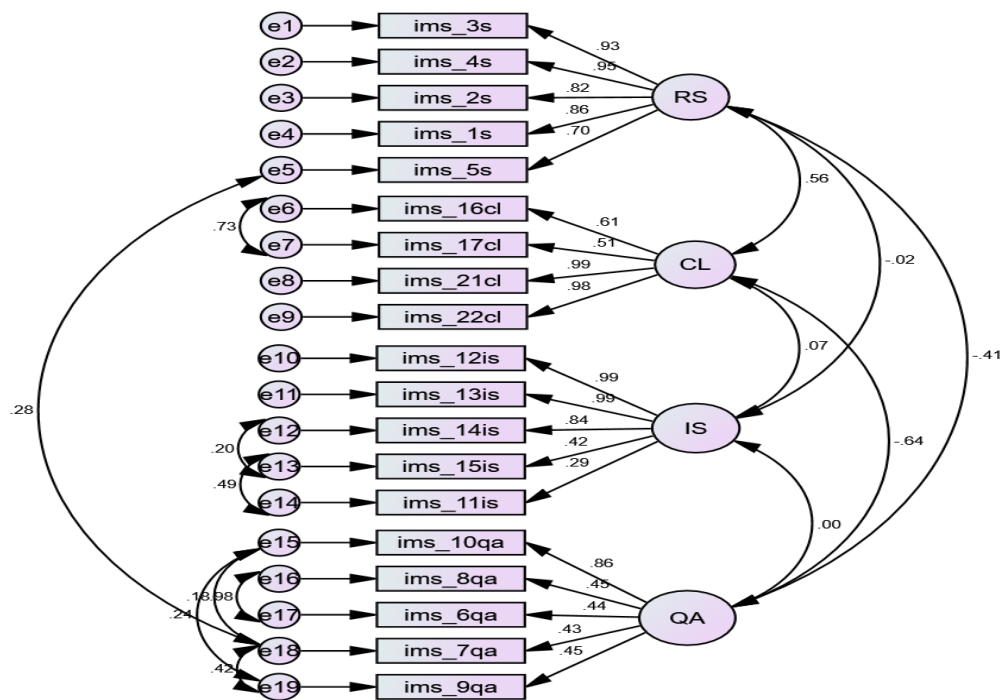


Figure 1. Measurement model of IMS Urdu (19 Items)

Comparison on Demographic Characteristics

Results indicated significant mean differences among a few demographics on four sub-factors of the IMS as shown in Table 4. Married men scored higher on relationship satisfaction and quality of alternatives. Participants who had love marriage scored higher on relationship satisfaction, quality of alternatives, and investment size factors. Participants living in the nuclear family system scored higher on relationship satisfaction and commitment level whereas those living in the joint family system scored higher on the quality of alternatives.

Moreover, participants married between the ages 26 to 30 years scored higher on relationship satisfaction and commitment level than those married before the age of 25 or after 31 respectively. There is a trend of investment in the relationship shown. Participants with marriage years more than 21 and above scored higher, than comes 16 to 20 years, 6 to 10 years, zero to five years, and 11 to 15 years respectively. Significant differences were

found in relationship satisfaction on the basis of the number of children. Married individuals having no children scored lower on relationship satisfaction than those having children.

Table 4
Comparison on Gender, Family System, and Marital Decision (N = 298)

Variables	Gender		Family System			Marital Decision			
	Men (n=152)	Women (n=146)	p	Nuclear (n=137)	Joint (n=161)	p	Love (n=129)	Arrange (n=169)	p
RS	34.11±7.90	32.04±9.70	.045	34.28±8.14	32.08±9.36	.032	34.75±6.58	31.83±10.12	.005
QA	11.52±10.38	6.39±7.47	.000	7.36±8.74	10.41±9.76	.005	10.24±9.94	8.07±8.91	.048
IS	24.80±11.09	23.24±10.34	.212	24.73±10.98	23.44±10.52	.301	26.47±9.88	22.17±11.01	.001
CL	28.66±6.51	29.88±5.40	.082	30.19±5.10	28.47±6.60	.013	29.94±5.32	28.74±6.46	.088

Note. RS = Relationship satisfaction, QA= Quality of Alternatives, IS = Investment Size, CL = Commitment Level

Table 5
Comparison on the Age of Marriage, Marital Years, and Number of Children (N = 298)

Variables	Age of Marriage			P
	18-25 years (n=130)	26-30 years (n=137)	31-35 years (n=31)	
RS	31.17±10.13	35.45±7.22	30.77±7.36	.000
QA	9.70±9.71	8.14±9.34	9.94±8.40	.339
IS	23.22±10.51	24.45±11.19	25.61±9.65	.444
CL	28.21±7.03	30.32±4.51	28.97±6.55	.015

Variables	Marital Years					P
	0-5 years (n=97)	6-10 years (n=97)	11-15 years (n=42)	16-20 years (n=40)	21 and above years (n=22)	
RS	31.60±9.02	33.15±8.96	35.17±8.16	35.03±8.9	31.95±8.24	.120
QA	10.30±9.03	8.13±9.07	6.86±7.75	10.10±12.21	9.27±9.35	.249
IS	22.03±10.98	24.91±8.65	20.81±9.34	26.86±14.50	30.05±8.97	.001
CL	27.70±7.68	30.20±5.18	30.19±4.52	30.10±3.59	28.68±6.03	.027

Variables	Number of Children					P
	None (n=65)	One (n=58)	Two (n=86)	Three (n=61)	Four and More (n=28)	
RS	29.26±9.22	34.07±10.11	34.44±7.86	32.85±8.42	36.36±6.52	.001
QA	9.68±8.22	9.40±9.33	6.85±9.93	9.28±8.01	12.68±12.20	.054
IS	23.88±10.18	25.78±10.91	23.91±10.30	21.50±12.27	26.71±8.58	.152
CL	27.77±8.13	29.93±5.51	29.99±4.88	28.80±6.18	30.07±2.87	.144

Note. RS = Relationship satisfaction, QA= Quality of Alternatives, IS = Investment Size, CL = Commitment Level

Discussion

The current study is the first one to validate the IMS in Urdu version for married individuals from Pakistan. Like other versions of IMS (Amirsardari & Khademi, 2019; Rodrigues & Lopes, 2013; Rusbult et al, 1998; VanderDrift et al., 2013), the Urdu version has shown good reliability (Ursachi et al., 2015), and same factorial structure as proposed in the original version (Rusbult et al., 1998). Furthermore, this research facilitated filling the research and literature gap from an important segment of the world.

In the CFA analysis, it was found that three items are reducing the goodness of fit value for the model. Those items were item number 18, 19, and 20. Among these, items 18 and 19 had low factor loadings than the minimum acceptable value of 0.3 (Rusbult & Martz, 1995). Whereas item number 20 was originally part of the commitment level and stated that 'I feel very attached to our relationship, very strongly linked to my partner' (میں اپنے رشتے سے بہت زیادہ جڑا ہوا محسوس کرتا ہوں یعنی اپنے شوہر/بیوی سے بہت مضبوط تعلق۔) appeared to be loaded on both factors of relationship satisfaction and commitment level with same loading below the acceptable range. SMEs were approached again to evaluate the equivalence of Urdu-translated items and their theoretical underpinning. Moreover, the repercussion associated

with the dropping of items from the final Urdu version. It was unanimously consented that 19 items along with their four-factor structure represent a comprehensible picture in terms of face validity and construct. In addition, CFA analysis and reliability estimates also depict a good fit model and highly reliable tool for married individuals of Pakistan with 19 items.

Results indicated significant mean differences among a few demographics on four sub-factors of the Investment Model Scale. Married men scored higher on relationship satisfaction and quality of alternatives. Participants who had a love marriage scored higher on relationship satisfaction, quality of alternatives, and investment size factors. Participants living in the nuclear family system scored higher on relationship satisfaction and commitment level whereas those living in the joint family system scored higher on the quality of alternatives. In collectivist societies, relationships are bound to be influenced by social and situational constraints, gender roles, as well as the current social context of a couple's life (VanderDrift et al., 2013; Zaman & Shehzad, 2018). Current study findings are in line with the study of Ayub et al. (2022) as they concluded that men are more satisfied in a relationship than their female counterparts but when it comes to bonding and emotional connection with partners, women scored slightly better than their spouses. Moreover, based on cultural inhibition and societal pressure women do not consider any available alternative of relationships whereas men are always considered to be the one attracted towards better option in relationship that is also instigated by religious and cultural acceptance of more female partners as male (Aman et al., 2019; Hayee & Kamal, 2022; Zaman & Shehzad, 2018). This supports the cultural notion that irrespective of whatever people are facing in a relationship they will ultimately report it to be satisfying as the social disapproval of ending such a relationship is higher (Bilal & Rasool, 2020; Qadir et al., 2013).

Significant differences were found in relationship satisfaction based on the number of children. Married individuals having no children scored lower on relationship satisfaction than those having children. The current study findings are supported by the work of Kowal et al. (2021). Their cross-cultural study concluded that marital satisfaction is negatively affected by the number of children, but this turns into a positive effect if intervened by religiosity, intercourse frequency, and education level. Current study findings supported this notion that with increasing age irrespective of the number of children, a person becomes closer to religion and therefore more committed to the relationship. For young people, the actual perks a partner brings to a relationship are more important than the number of children, which is why they were more inclined towards available alternatives even though they feel committed to a relationship.

Empirically once couples have children their love and affection shift from partner to children, ultimately resulting in lowering marital satisfaction (Twenge et al., 2003). Therefore, marital satisfaction changes throughout life based on various psychophysical and social aspects (Nunes et al., 2022; Stephen & Raj, 2014) and current study findings also reported this shift in the context of number of married years with the current partner. Participants married between the ages of 26 to 30 years scored higher on relationship satisfaction and commitment level than those married before the age of 25 or after 31 respectively. There is a trend of investment in the relationship shown. Participants with marriage years more than 21 and above scored higher, than comes 16 to 20 years, 6 to 10 years, zero to five years, and 11 to 15 years respectively.

Despite having economic crises and hardships of life, and the lack of facilities available to families and partners in Western societies, families and partners still have feelings of connectedness and contentment in their relationship.

Conclusion

The Urdu version of Investment Model Scale was found to be valid and reliable measure for assessing the relationship investment in domains of relationship satisfaction, investment size, availability of alternatives, and commitment level. Further, results revealed that factorial structure of Urdu version is similar to original English version. Therefore, it supports the use for investigation of investment in married relationships.

Recommendations

Apart from foremost strength of study that is providing a validated tool in Urdu language for Pakistani population by addressing the limitation in this domain, one of the limitations is geographical aspect, as data was only collected from five provincial capitals. Moreover, educated people those who have education above matriculation/O levels participated in the study. People that are below this level and can easily understand and read Urdu language were excluded. Future researchers can include such participants to have more diverse responses. Current study focused on cross-sectional design, for future studies longitudinal approach can be followed to provide more concrete claims for validity.

References

- Aman, J., Abbas, J., Nurunnabi, M., & Bano, S. (2019). The Relationship of Religiosity and Marital Satisfaction: The Role of Religious Commitment and Practices on Marital Satisfaction Among Pakistani Respondents. *Behavioral Sciences*, 9(3), 30. <http://dx.doi.org/10.3390/bs9030030>
- Amirsardari, L., & Khademi, A. (2019). Psychometric Properties of Rusbult's Relationship Investment Scale. *Jentashapir Journal of Health Research*, 9(6). doi: 10.5812/jjhr.85389
- Arif, N., & Fatima, I. (2015). Marital satisfaction in different types of marriages. *Pakistan Journal of Social and Clinical Psychology*, 13(1), 36-40.
- Ayub, N., & Iqbal, S. (2022). Couples relationship standards and satisfaction in Pakistani couples. *Journal of Marital and Family Therapy*, 49(1), 111-128
- Bilal, A., & Rasool, S. (2020). Marital satisfaction and satisfaction with life: mediating role of sexual satisfaction in married women. *Journal of Psychosexual Health*, 2(1), 77-86. <https://doi.org/10.1177/2631831820912873>.
- Borsa, J. C., Damasio, B. F., & Bandeira, D. R. (2012). Cross cultural adaptation and validation of psychological instruments: some considerations. *Paideia*, 22(53), 423-432. Doi: <http://dx.doi.org/10.1590/1982-43272253201314>
- Bradbury, T. N., Fincham, F. D., & Beach, S. R. H. (2000). Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage and Family*, 62(4), 964-980. <https://doi.org/10.1111/j.1741-3737.2000.00964.x>
- Capistrant, B. D., Pruett, M. K., Rivera, S., Gilette, P., Cowan, C. P., & Cowan, P. A. (2020). Earner status, marital satisfaction, and division of childcare among Mexican American and Caucasian couples. *Smith College Studies in Social Work*, 90(3), 156-180. <https://doi.org/10.1080/00377317.2020.1715750>
- Christopher, C., Umemura, T., Mann, T., Jacobvitz, D., & Hazen, N. (2015). Marital quality over the transition to parenthood as a predictor of coparenting. *Journal of Child and Family Studies*, 24(12), 3636-3651. <https://doi.org/10.1007/s10826-015-0172-0>
- Delatorre, M. Z., & Wagner, A. (2020). Marital quality assessment: Reviewing the concept, instruments, and methods. *Marriage & Family Review*, 56(3), 193-216. <https://doi.org/10.1080/01494929.2020.1712300>
- Field, A. (2009). *Discovering statistics using SPSS (3rd ed.)*. Sage Publication Ltd, London.
- Finger, B., Hans, S. L., Bernstein, V. J., & Cox, S. M. (2009). Parent relationship quality and infant- mother attachment. *Attachment & Human Development*, 11(3), 285-306. <https://doi.org/10.1080/14616730902814960>
- GallupPak. (2019). *Daily Polls*. <https://gallup.com.pk/post/27670>
- Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., Duan, L., Almaliach, A., Ang, S., Arnadottir, J., Aycan, Z., Boehnke, K., Boski, P., Cabechinhas, R., Chan, D., Chhokar, J., D'Amato, A., Ferrer, M., ... Yamaguchi, S. (2011). Difference between tight and loose cultures: A 33-Nation Study. *Science*, 332(6033), 1100-1104. <https://doi.org/10.1126/science.1197754>.

- George, D. M. P. (2003). *SPSS for Windows Step by Step: A Simple Guide and Reference. 11.0 update. Reference and Research Book News 17*. Boston, MA: Allyn & Bacon.
- George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update (10a ed.)* Boston: Pearson.
- Gjersing, L., Caplehorn, J. R. M., & Clausen, T. (2010). Cross-cultural adaptation of research instruments: language, setting, time and statistical considerations. *BMS Med Res Methodology, 10*(13). <https://doi.org/10.1186/1471-2288-10-13>
- Goldfarb, M. R., & Trudel, G. (2019). Marital quality and depression: A review. *Marriage & Family Review, 55*(8), 737–763. <https://doi.org/10.1080/01494929.2019.1610136>
- Gudmundsson, E. (2009). Guidelines for translating and adapting psychological instruments. *Nordic Psychology, 61*(2), 29-45. doi:10.1027/1901-2276.61.2.29
- Hackett, C., Grim, B. J., Stonawski, M., Skirbekk, V., Potancokova, M., & Abel, G. (2012). *The global religious landscape: A report on the size and distribution of the World's major religious groups as 2010*. Pew Research Center.
- Hayee, A. A., & Kamal, A. (2022). Experience of childhood abuse and marital relationships: A qualitative perspective of victims and professionals from Pakistan. *International Journal of Special Education, 37*(3), 4119-4133.
- Iqbal, S., Ayub, N., van de Vijver, F., & Halford, W. K. (2019). *Couple Relationship Standards in Pakistan. Couple and Family Psychology: Research and Practice*. Advance online publication. <http://dx.doi.org/10.1037/cfp0000124>
- Jackson, J. B., Miller, R. B., Oka, M., & Henry, R. G. (2014). Gender differences in marital satisfaction: A meta-analysis. *Journal of Marriage and Family, 76*(1), 105–129. <https://doi.org/10.1111/jomf.12077>
- Kanter, J. B., & Proulx, C. M. (2021). The longitudinal association between marital and psychological functioning in socioeconomically disadvantaged relationships. *Journal of Social and Personal Relationships, 38*(9), 2465–2473. <https://doi.org/10.1177/02654075211011704>
- Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence*. New York: Wiley.
- Kim, H., Ku, B., Kim, J. Y., Park, Y. J., & Park, Y. B. (2016). *Confirmatory and Exploratory Factor Analysis for Validating the Phlegm Pattern Questionnaire for Healthy Subjects*. Evidence-based complementary and alternative medicine: eCAM. <https://doi.org/10.1155/2016/2696019>
- Kim, S. M., & Kim, H. M. (2018). Effect of observation error variance adjustment on numerical weather prediction using forecast sensitivity to error covariance parameters, *Tellus A: Dynamic Meteorology and Oceanography, 70*(1), 1-16. <https://doi.org/10.1080/16000870.2018.1492839>.
- Lai, B. P., Chung, T. K., Lee, D. T., Kong, G. W., and Lok, I. H. (2013). Measuring grief following miscarriage: psychometric properties of the Chinese version of the Perinatal Grief Scale. *Assessment 20*, 123–129. doi: 10.1177/1073191110397275

- Le, B., & Agnew, C. R. (2003). Commitment and its theorized determinants: A meta-analysis of the investment model. *Personal Relationships, 10*(1), 37–57. <https://doi.org/10.1111/1475-6811.00035>
- Le, B., Dove, N. L., Agnew, C. R., Korn, M. S. & Mutso, A. A. (2010). Predicting nonmarital romantic relationship dissolution: A meta-analytic synthesis. *Personal Relationships, 17*, 377-390. <https://doi.org/10.1111/j.1475-6811.2010.01285.x>
- Masarik, A. S., Martin, M. J., Ferrer, E., Lorenz, F. O., Conger, K. J., & Conger, R. D. (2016). Couple resilience to economic pressure over time and across generations. *Journal of Marriage and Family, 78*(2), 326–345. <https://doi.org/10.1111/jomf.12284>
- Muzaffar, M., Yaseen, Z., & Ahmad, A. (2018). Child Marriages in Pakistan: Causes and Consequences. *Journal of Indian Studies, 4* (2), 195-207
- Nunes, C., Martins, C., Leal, A., Pechorro, P., Ferreira, L. I., & Ayala-Nunes, L. (2022). The ENRICH Marital Satisfaction (EMS) Scale: A Psychometric Study in a Sample of Portuguese Parents. *Social Sciences, 11*(3), 107.
- Oliveira, S. E. S., & Bandeira, D. R. (2011). Linguistic and cultural adaptation of the Inventory of Personality Organization for the Brazilian culture. *Journal of Depression and Anxiety, 1*(1), 1-9. <https://doi.org/10.4172/2167-1044.1000105>
- Ortiz-Ospina, E., & Roser, M. (2020). *Marriages and Divorces*. <https://ourworldindata.org/marriages-and-divorces>
- Pakistan Ministry of Finance. (2022). *Highlights Pakistan Economic Survey 2021-2022*.
- Qadir, F., Khalid, A., Haqqani, S., Huma, Z., & Medhin, G. (2013). The association of marital relationship and perceived social support with mental health of women in Pakistan. *BioMedCentral Public Health, 13*. <https://doi.org/10.1186/1471-2458-13-1150>.
- Rodrigues, D. & Lopes, D. (2013). The Investment Model Scale (IMS): Further studies on construct validation and development of a shorter version (IMS-S). *Journal of General Psychology, 140*, 16-28. doi:10.1080/00221309.2012.710276
- Rusbult, C. (1980). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology, 16*, 172 – 186.
- Rusbult, C. E., Martz, J. M. (1995). Remaining in an abusive relationship: An investment model analysis of nonvoluntary dependence. *Personality and Social, Psychological Bulletin, 21*(6), 558-71. doi: 10.1177/0146167295216002.
- Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships, 5*, 357-391.
- Schumm, W. R., Figley, C. R., & Jurich, A. P. (1979). Dimensionality of the marital communication inventory: A preliminary factor analytic study. *Psychological Reports, 45*(1), 123–128. <https://doi.org/10.2466/pr0.1979.45.1.123>
- Schwartz, S. H. (2014). Rethinking the Concept and Measurement of Societal Culture in Light of Empirical Findings. *Journal of Cross-Cultural Psychology, 45*(1), 5–13.

- Shultz, K. P., & Englert, K. (2021). Cultural validity as foundation to assessment development: An indigenous example. *Frontiers in Education*, 6. <https://www.frontiersin.org/articles/10.3389/educ.2021.701973/full>
- Sireci, S. G., Yang, Y., Harter, J., & Ehrlich, E. J. (2006). Evaluating guidelines for test adaptations: A methodological analysis of translation quality. *Journal of Cross-Cultural Psychology*, 37(5), 557-567. doi:10.1177/0022022106290478
- Stephen, C., & Raj, J. S. (2014). U-shaped curve of marital satisfaction: An Indian scenario. *Research Horizons*, 4, 176-183. <https://doi.org/10.2307/352971>
- Stephen, C., & Raj, J. S. (2014). U-shaped curve of marital satisfaction: An Indian scenario. *Research Horizons*, 4, 176-183. <https://doi.org/10.2307/352971>
- Twenge, J. M., Campbell, W. K., & Foster, C. A. (2003). Parenthood and marital satisfaction: A meta-analytic review. *Journal of Marriage and Family*, 65(3), 574-583.
- Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How reliable are measurement scales? External factors with Indirect Influence on Reliability Estimators. *Procedia economics and Finance*, 20, 679-686.
- VanderDrift, L. E., Agnew, C. R., & Wilson, J. E. (2013). *Spanish version of the Investment Model Scale*. <https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1068&context=psychpubs>
- Yoo, J. (2020). Relationships between Korean parents' marital satisfaction, parental satisfaction, and parent-child relationship quality. *Journal of Social and Personal Relationships*, 37(7), 2270-2285
- Zaman, M., & Shehzad, H. (2018). Marriage and family conflicts in Pakistan: Indigenous Model of Conflict Management. *Journal of Gender and Social Issues*, 17(2), 16-30.