

Midlife Career Stress: Construction & Initial Validation of a Multidimensional Measure

Ahmad Faraz Khan & Parvaiz Talib

This article aims to provide an original, valid and reliable measure of Midlife Career Stress (MLCS). Based on extensive literature review a conceptual framework of MLCS was developed. Using three different samples (N=781) systematic scale development process was employed containing item-generation, content adequacy, content analysis, exploratory factor analysis, confirmatory factor analysis, reliability and validity assessment. The analysis provided a validated multi-dimensional structure of MLCS scale with Aspiration-Achievement Gap (AAG), Generativity (Gen) and Impediments to change (Imp) as the three factors. HR managers, OD professionals, psychologists and researchers may find the MLCS scale a useful tool for measuring stress among midlife managers.

Ahmad Faraz Khan (E-mail:ahmadfk1@gmail.com) & **Parvaiz Talib** (E-mail: parvaiztalib@gmail.com) are from Department of Business Administration, Faculty of Management Studies and Research, Aligarh Muslim University, Aligarh

Introduction

Contemporary work environment is turbulent and dynamic (Arthur, Inkson & Pringle, 1999; Hall, 2002). According to a rough estimate around 30-40% executives in India suffer from stress (De Souza, 2012). Stress accounts for twice the costs of non-stress physical injury at the workplace, which is close to \$200 billion per annum (Byrum-Robinson, 1993). There is a long list of stressors identified by researchers including role in the organization, relationships at work, work culture, job content, plateauing etc. Even non-work stressors are heavy contributors to the overall strain on the individual (Cartwright & Cooper, 1997).

Stress at different phases in life tends to be different. It has been observed that midlife is vulnerable to stress. Midlife managers are a critical asset who experience a unique set of age-related issues which their counterparts in young and old adulthood may not experience. Withdrawal of midlife managers from work due to stress may result in crisis in succession planning apart from loss on the financial front. Moreover, 'Mid-career gaps' are on the increase (Schneer&

Reitman, 1997). The problems associated with stress arise when the demand put on the individual outweigh the resources and coping strategies to meet those demands (Bal, Campbell & McDowell-Larsen, 2008). Loss of experienced midlife managers due to stress is an even bigger loss for the organization vis-à-vis loss of other entry level executives. A substantial amount of time and money has already been invested in midlife managers. Moreover, midlife managers are due to acquire or are already getting into leadership roles in many organizations. As a stepping stone to aid the understanding of midlife career related issues, the present study attempts to develop and validate a scale that captures the phenomenon of midlife career stress (MLCS), as age related stress has largely been ignored by researchers in the past (Jex, 1998).

Theoretical Background

Midlife is considered as the afternoon of life. The onset of this phase is characterized by stagnation in life and career. There is lack of clarity regarding the exact timing of the onslaught of midlife. It is typically seen as starting at age 40 and extending to age 60, but with vague and fuzzy boundaries (Staudinger & Bluck, 2001). The timing of midlife also depends on whether the respondent is older, middle-aged or young adult (Lachman, Lewkowicz, Marcus & Peng, 1994) as people age at different rates (Shute, 1997). Midlife can further be defined biologically (as the later decades of reproductively mature adulthood) (Lu, 2011) or in terms of relationship as the

time when parents age and children grow up and move out (Noller, Feeney, & Peterson, 2001). This phase has been conceptualized as transitional in nature marked by new roles, expectations and anticipations. Midlife being a turbulent phase is often stressful (Khan, Talib & Akhtar, 2014). Managers are prone to career change decision during midlife (Louis, 1980). Though middle-aged managers are considered at their peak (Neugarten, 1968), they tend to experience biological, social and psychological changes (Pillari, 1998) which may be stressful.

According to Jaques (1965) coming to terms with our mortality is the central developmental task of midlife. Adults in midlife start worrying about deterioration in health and various manifestations of ageing (Dziegielewski, Heymann, Green & Gichia, 2002). Physical changes in men like decreased hair growth, deterioration of the sex glands, wrinkles, slowing blood circulation, sluggish digestion, and the vulnerability of the prostate to problems, including prostate cancer, a slow response time, a decrease in cardiovascular efficiency are commonly observed (Dziegielewski, et al., 2002). Watching physiological changes in oneself compels middle adults to confront death as a not so distant possibility (Freund and Ritter, 2009). The MIDUS survey found that physical health had a significant positive as well as negative affect across the adult years (Brim et al., 2004).

Psychosocial aspects in midlife are the more difficult for both men and women, although the physical changes

can appear to be more threatening (Dziegielewski et al., 2002). Midlife is a phase in an executive's life when he starts feeling uneasy regarding his job and personal life and socio-economic status etc. (Strenger & Ruttenberg, 2008). This is a period of self-doubt where the individual looks back at his life with a feeling of regret, guilt or incompleteness or a combination of these feelings (Appelbaum & Finestone, 1994). Strenger and Ruttenburg (2008) noted that the midlife is the onset of decline and that the main psychological task of midlife is to come to terms with this decline (Cohen, 2005). In terms of developmental task perspective, midlife is defined as the period during which a "struggle" occurs between generativity and stagnation (Lachman, 2004). The period also triggers a realization that very little time is left to pursue their original dreams (Jacques, 1965; Levinson, Darrow, Klein, Levinson & McKee, 1978) as there is a change in time perspective from "time since birth" to "time left to live" (Neugarten, 1968).

Midlife is defined as the period during which a "struggle" occurs between generativity and stagnation.

Auster & Ekstein (2005) calls midlife, a time when work/life trade-offs and high performance expectations tend to collide. Midlife generation is often termed a sandwich generation, as they need to fulfill the needs of both their children and their ageing parents. Playing multiple roles like that of spouses, mothers and fathers, caregivers or receivers may

cause a crisis (Brandes, 1986). In such a scenario conflicts between requirements at work and home are common. During this phase the executive has a feeling of discontentment with his life-both personally and professionally (Choy & Savery, 1998). The person feels that he is not being able to use his potential to the fullest (Drago et.al, 2005). Feeling of skill obsolescence is common among middle aged executives (Vries, 1993; McCune et al., 1988; Levinson, 1978).

Middle age came to be associated with reassessment (Vries, 1993; Levinson, 1978) in general but with the coining of the term "midlife crisis" by Elliott Jaques in a paper published in 1965 it acquired a negative connotation for many years to come. The notion of crisis attaches negativity to this phase of life. After analysing relevant literature on the theme of midlife, we found "midlife career stress" a fitting term to describe the complex and intermingled nature of state at midlife. Midlife Career Stress (MLCS) is described as a peculiar stress encountered by midlife adults before or during midlife transition. MLCS can be assumed to be the stage before "crisis" stage. Successful coping with MLCS shall result in successful midlife transition, thereby avoiding the "crisis" stage.

Literature is replete with references documenting Midlife Crisis, but most of them theoretical (such as Dziegielewski et al., 2002; Freud & Ritter, 2009). Even evidence based studies are mostly qualitative in nature and lack solid empirical grounding (example Brown et al., 2012;

2001; Rae, 2005; Strenger, 2009). Though a lot of quantitative survey based studies report issues related to midlife (such as Lu, 2011; Mendenhall et al., 2008; Perrig-Chiello & Perren, 2005), only one used a proper exclusive scale for measuring midlife crisis (Oles, 1999). The scale, developed in Poland, was not found appropriate for assessment of MLCS. Non-availability of a validated scale was found to be one of the primary reasons for haziness surrounding MLCS. Hence, a need was felt to re-conceptualize MLCS in the light of existing socio-cultural milieu. An original, valid, and reliable measure of MLCS shall aid in objective psychological assessment of midlife managers. It may further assist in exploring the phenomenon of MLCS across cultures and demographic segments.

Though, midlife witnesses compounding of various issues, however, the phenomenon of MLCS was conceptualized as multi-dimensional with aspiration-achievement gap, generativity, physiological impediments and psychological impediments as its four constructs. Other issues identified may contribute to the phenomenon by way of mediation, moderation, or consequence.

Study 1-Part 1

In study 1, a rigorous process of item generation was adopted based on literature review. These items were checked for content validity and content adequacy (Part 1). Additional data was collected for exploratory factor analysis (Part 2) to define the factor structure of the scale.

Item generation: Deductive approach was employed for item generation (Hinkin, 1998). A pool of 50 items was generated. This pool contained items from Loyola Generativity Scale (LGS) (McAdams & de St. Aubin, 1992; McAdams, Hart & Maruna, 1998), Ryff's Psychological Well-Being Scale (Ryff, 1989), Feelings About Life Scale (Stewart, Ostrove & Helson, 2001), Oles (2014), and Landers (1993). Each item was generated as a statement capturing one of the four constructs of MLCS. While developing items, following was assumed: avoiding exceptionally lengthy items; readability level of each item; double-barrelled items; ambiguous pronoun references, and positively and negatively worded items (DeVillis, 2003).

Content Validity: Ten experts were given our definitions of the constructs along with a yes/no option. The items on which eight or more raters agreed, were retained for further analysis. Thirty three items were retained based on inter-rater agreement.

Content Adequacy: Following the guidelines provided by Schriesheim et al. (1993), retained items were subjected to a content adequacy test. In this test, respondents were asked to determine the degree to which each of the items represented a MLCS construct. The raters consisted of 109 post graduate students. As the main requirement for a content adequacy judge is the "sufficient intellectual ability to perform the item rating task in an unbiased manner" (Schriesheim et al., 1993), using college students as judges was appropriate. The items were retained

if their highest mean corresponded with the intended construct of MLCS, and the highest mean had to be sufficiently different (at least 0.2) from the ratings obtained for the other constructs. Thirteen were dropped at this stage.

Part 2

Measurement scheme adopted was five-point Likert scale (strongly agree to strongly disagree).

Participants: Questionnaire (24 retained items) was administered on 450 midlife managers. Out of which, only 201 were found complete in all respects. These were found fit for analysis, making it a response rate of 44.67%. Heterogeneity was ensured by including cross-section of industries (telecom, banking, IT/ITES, manufacturing, consulting firms, etc.), neutralizing hour of the day and day of the week effect, multi-location study and employing multi-method (web-form as well as pencil-paper form). The sample consisted of 167 males (83.1%). 166 (82.6 %) of the respondents were in the age group of 35-50. 129 (64.2 %) were employed in private sector companies.

Analyses and results: Maximum Likelihood Factor Analysis with promax rotation was performed to extract the factors. Sampling adequacy was measured using Kaiser-Meyer-Olkin (KMO) test (Field, 2005; Kaiser, 1974). A value between 0.7 and 0.8 is considered good (Field, 2009). Further reliability check was done by computing Cronbach Alpha (α). A value greater than 0.6 is considered reliable (Fornell & Larcker, 1981). In order

to determine the number factors, multiple criteria was used (Ford, MacCallum & Tait, 1986; Kim & Mueller, 1978; Stevens, 1992) such as Kaiser's criterion, where only factors with eigen values greater than 1 are retained; cumulative % of variance explained; and the scree plot of factor eigen values. For psychometric purposes factor loading of 0.3 or above are considered appropriate if the sample size is sufficiently large (Hair et al., 2010). We retained items with loadings above 0.3. Significant cross-loadings were also checked and such items were deleted (McDonald, 1981; Nunnally, 1979).

After the above mentioned exercise, six items were deleted and a three factor structure emerged. Achievement-aspiration gap (AAG), generativity (Gen) and impediments (physiological) were the retained factors/dimensions. Results of EFA are given in Table 1.

Referring previously developed scales and thoroughly reviewing and piloting items are important steps in the numerous iterations involved in scale development (Spector, 1992). After study 1, MLCS scale consisted 14 items representing three constructs. It was felt that the scale needs further augmentation in order to capture the intended phenomenon in a holistic manner. Hence, scale augmentation process was carried forward in study 2.

Study 2

Item development: The existing fourteen item scale was augmented with the help of subject matter experts. Additional

Table 1 Factor Analysis & Reliability Analysis (Study 1)

	<i>KMO= 0.812</i>				
	Aspiration- Achievement Gap $\alpha = 0.746$	Generati- vity $\alpha = 0.755$	Impediments (Physio- logical) $\alpha = 0.719$	Mean	SD
Var_24	.711	-.114	-.172	4.0398	1.93608
Var_7	.583	-.042	-.038	3.8209	1.60865
Var_8	.581	.109	.011	3.6617	1.37658
Var_22	.565	.099	.006	3.6816	1.42060
Var_11	.497	-.047	.186	3.5821	1.36179
Var_12	.421	-.105	.243	2.9204	1.46411
Var_10	.306	.067	.045	2.9801	1.37826
Var_5	.010	.851	.066	3.3433	1.51544
Var_6	.145	.826	-.011	3.3184	1.37044
Var_21	-.123	.531	.091	3.2537	1.46298
Var_23	.020	.465	-.075	3.8507	1.42745
Var_2	-.010	.060	.811	3.7761	1.35448
Var_4	.004	-.135	.693	3.8109	1.44363
Var_3	.007	-.011	.682	3.9801	1.33026

Note: The results of goodness-of-fit test indicated a three-factor structure. $\chi^2 (63) = 97.654$, $p = 0.003$, for the three-factor structure was significantly lower than that for one-factor structure $\chi^2 (90) = 329.146$, $p = 0.000$.

ten items were added based on literature review and valuable insights gained during the scale administration in phase I of the study. A new construct of psychological impediments was added after due deliberation.

Participants. The study employed purposive judgmental and snowball sampling techniques. Managers having more than 9 years of total work experience were included in the study. Covering email along with a web-link of the questionnaire was also prepared. The researcher further requested the respondents to snowball the web-link. In all, over 5000 e-mails were sent. Moreover, a paper-pencil version of the research instrument was also administered after seeking the requisite consent. In total 461 responses were collected through web-

link and 60 through paper-pencil version, making a total of 541 responses. Data screening and cleaning was performed on these responses, which led to the final sample size of 471. For multivariate analysis a sample size of 300 is considered good (Wimmer & Dominick, 2000).

The respondent profile was quite heterogeneous. They included managers from different fields like IT, telecom, banking, engineering services, iron and steel, petroleum etc. The scope was not limited to any one industry. Out of the 471 managers included in the sample, 257 belonged to the age group 35-41 years (early midlife), 133 were between the age of 41-48 (middle midlife) and the remaining 81 were between 48-55 years old (late midlife). The age categories were verified by subject matter experts and indus-

try consultants for their appropriateness with respect to socio-cultural milieu of India. Out of the total sample, only 76 were female managers. 205 managers were from the dual career context whereas 266 were from the single career families. Moreover, 72% managers were having more than 11 years of work experience.

Procedure: We randomly divided the 471 responses into two groups. One of 235 for exploratory factor analysis (EFA), and another of 236 for confirmatory factor analysis (CFA).

EFA Results: Maximum Likelihood Factor Analysis with promax rotation was performed on the 24 items. Sample was adequate for EFA as KMO value was 0.837. Five items had factor loading less than 0.4 and were deleted. Further two items showed cross-loadings and were removed. A three-factor structure with

seventeen items was retained after exploratory factor analysis. The results of EFA are presented in Table 2.

Factor 1 is labelled as aspiration-achievement gap (AAG), whereas Factor 2 as impediment to change (Imp) and Factor 3 as generativity (Gen). The definitions of the factors (dimensions) are presented in Table 3.

Confirmatory Factor Analysis: CFA was performed to check the dimensionality of the three-factor structure. For comparison purposes, a two-factor and a single-factor model were also examined. For three-factor structure the chi-square value was 219.521 (df=115), whereas, for two-factor structure it was 357.909 (df=118) and for one-factor structure 605.207 (df=119). The indices showed the three-factor model to be the best fitting model, as shown in Table 5.

Table 2 Results of EFA and Reliability Analysis

	Achievement-Aspiration Gap ($\alpha=0.852$)	Impediments to Change ($\alpha=0.813$)	Generativity ($\alpha=0.690$)
AAG_6	.821	.010	.004
AAG_3	.816	-.080	-.084
AAG_4	.736	.002	.044
AAG_1	.686	-.005	.018
AAG_5	.642	-.009	.014
AAG_2	.524	.062	.011
Ph_4	-.088	.828	.046
Ph_1	-.150	.640	-.044
Ph_3	.063	.603	.086
Ph_2	.072	.542	-.004
Psy_1	-.003	.540	.002
Ph_5	.144	.529	-.038
Ph_6	.282	.504	-.040
Gen_2	.097	-.098	.750
Gen_5	-.059	.008	.624
Gen_4	-.028	.043	.564
Gen_6	-.013	.076	.482

Table 3 Working Definitions

Factor/Dimension	Working Definition
Aspiration-Achievement (AAG)	The difference between the present state and the goals set Gap earlier in life.
Generativity (Gen)	The concern of mentoring the next generation and leaving a lasting legacy behind.
Impediments to change (Imp)	The roadblocks that come in the way of making a desired career move.

Table 4 Final Scale Items

Achievement-Aspiration Gap (AAG)
1. I feel disappointed about my achievements in life in many ways.
2. I feel like moving away from my current engagements to what I had aspired for.
3. I feel my aspirations and my achievements do not match.
4. I feel my aspirations and my present job do not match.
5. I feel I have not done enough to achieve my aspirations.
6. I feel a mismatch between my aspirations and my career path.
Generativity (Gen)
1. I try to contribute to my community's well-being.
2. I try to contribute to the people around me.
3. I try to get productively involved in social work.
4. I try to build a legacy through my contributions, so that people remember me when I am gone.
Impediments to change (Imp)
1. It concerns me that I am becoming physically less agile.
2. I feel I have less energy than before.
3. My advancing age sets certain limitations.
4. It concerns me that my health may deteriorate further.
5. I feel stuck due to my deteriorating health.
6. I feel stuck due to my advancing age.
7. I am disturbed when I think about the shortness of life.

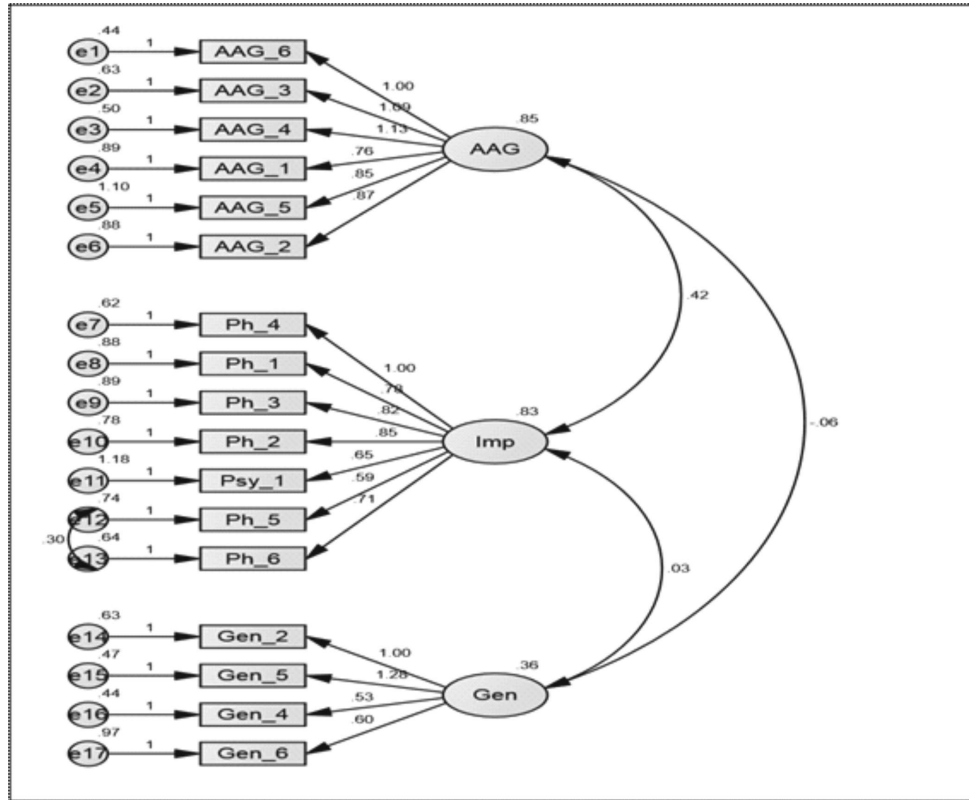
Table 5 Estimates of CFA Fit Indices

Fit indicators	Recommended value	Three-factor structure	Two-factor structure	One-factor structure
CMIN/df	<3.00	1.909	3.033	5.086
Normed fit index (NFI)	>0.90	.846	.748	.574
Goodness fit index (GFI)	>0.90	.901	.840	.714
Adjusted goodness fit index (AGFI)	>0.90	.868	.793	.632
Comparative fit index (CFI)	>0.90	.919	.813	.622
Incremental fit index (IFI)	>0.90	.920	.816	.627
Root mean square error of approximation (RMSEA)	<0.08	.062	.093	.132

Note: N=236.

Source: Hair et al. (2006), Arbuckle (2003), Byrne (2001), Salisbury et al.(2002), Schumacker & Lomax (2004) and Kline (1998)

Figure 1 CFA Model (three-factor structure)



Internal Consistency of each factor was estimated with Cronbach Alpha (Table 1). In order to assess the discriminant validity, factor correlations from the confirmatory factor analysis was reviewed. All the factor correlations were found to be less than 0.6, as depicted in Table 6. Thus, discriminant validity was shown.

Table 6 Factor Correlations Matrix from CFA Analysis

Dimension/Factor	AAG	Imp	Gen
AAG	1.000	-	-
Imp	.551	1.000	-
Gen	-.191	-.100	1.000

Discussion

The main purpose of this multistage investigation was to develop a comprehensive scale that can quantitatively measure the phenomenon of MLCS among Indian managers. Age specific stress and performance has not been paid much attention by researchers in the past (Jex, 1998). Although a few studies in the past have qualitatively assessed midlife crisis, no topical scale was available for the assessment of MLCS. The items of the scale were developed on the basis of extensive literature review. The items cover broad domains of midlife stress

experience rather than focussing only on narrow components of the midlife experience. This makes the scale comprehensive. The three dimensions of the scale are conceptually consistent with the contemporary literature on life-span development theory and stressfulness of midlife.

Established psychometric procedure for scale development was adopted (DeVillis, 2003; Schriesheim et al., 1993). A three factor model accounting for 51.4% of the total variance insightfully explained major dimensions identified in the literature. Confirmatory factor analysis provided satisfactory evidence in support of the MLCS scale. The feeling of non-achievement and regret in midlife is captured by the construct of aspiration-achievement gap. Impediments to change in midlife is pronounced by additional responsibilities and fall in risk appetite due to advancing age. Most of the previous researches have treated stressors as destructive and down-played the importance of productive or functional side of stress. The present study refrains from treating stress as altogether a negative phenomenon. The dimension of generativity forms an important construct of MLCS scale emphasising that there is a positive side to midlife stress, which propels the midlife adults towards achievement of self-actualization.

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Although, work stress has been studied extensively (Sullivan & Bhagat, 1992), the interaction between stress and midlife issues such as career transitions are rarely examined (Leana & Feldman, 1994). The proposed scale claims to be a measure balancing the specificity of midlife issues with the contemporary conceptualization of stress. It can serve as a diagnostic tool that will allow psychologists and organizational practitioners to assess the psychological needs of midlife employees. Training and development modules could be modelled around the issues identified using the scale. Spotting employees having high score on generativity can augment the human resource needs for corporate social responsibility activities as well as filling mentoring roles. Alternatively, the items of the scale can help the midlife managers assess their attitude and determine remedial actions consciously.

Limitations

Although the study reports the measure as reliable and valid in the preliminary investigations, the results must be viewed with caution. The limitations of the research design provide for further investigation of predictive and concurrent validity of the MLCS scale. Despite efforts to collect a heterogeneous sample, complete randomization was not ensured. This may have resulted in a selection bias (Heppner, Kivlighan & Wampold, 1999). Thus, generalizations cannot be made for the whole population. Another probable limitation can be with respect to the conceptualization of the measure as the three factors accounted for 51% of the variance. There is a lot of

scope for continued refinement and modification of the scale.

Future Research Directions

Future studies can be directed at exploring the criterion related validity of the present measure. Model development examining the predictive relationship of MLCS with performance measures could be undertaken. Also, future research could modify the existing scale by incorporating other representative dimensions of the midlife phenomenon, thereby making the measure more comprehensive. Further, discrimination across demographic criteria such as gender, industry and culture could be explored. Moreover, different research designs incorporating triangulation and cross-validation techniques can be utilized by researchers.

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