CHAPTER-II
REVIEW
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"The key to the vast storehouse of published literature may open doors to sources of significant problems and explanatory hypotheses and provide helpful orientation for definition of the problem, background for selection of procedure and comparative data for interpretation of results."

(Good, C.V.)

Research takes advantage of the knowledge which has accumulated in the past as a result of constant human endeavour. A careful review of the research journal, books, dissertations, theses and other sources of information on the problem to be investigated is one of the important steps in the planning of the research study (Koul, 2009). Review of related means to locate, to read and to evaluate the past as well as current studies of the research concerned with the planned investigation. Review of related literature makes a researcher aware of the nature, kind and magnitude of the work done in the field and indicates the direction of the further studies on the subject. Sometimes the review of relevant literature helps the investigator to locate the probable and possible topics of research and to conceptualize the research problem explicitly and meaningfully (Mishra, Saxena and Mohanty, 2003).

A literature review is an evaluative report of studies found in the literature related to selected area and goes beyond the search for information including the identification and articulation of relationships between the literature and particular field of research. It should give a theoretical basis for the research and help the investigator to determine the nature of his/her own research. It should help the researcher to select a limited number of works that are central to specific area rather than trying to collect a large number of works that are not as closely connected to that particular area (Boote and Beile, 2005). After reviewing an array of studies, the investigator had compiled and presented the chapter in following sections:

Section-2.1 Review related to Personal Growth Initiative
Section-2.2 Studies related to Self-Efficacy
Section-2.3 Review regarding Risk-Taking Behaviour
Section-2.4 Literature related to Mental Health
Section-2.5 An Overview- Review of Related Literature

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SECTION 2.1

REVIEW RELATED TO PERSONAL GROWTH INITIATIVE

In this section, literature related to PGI till date across countries and various cultures was reviewed for giving sound base to the study. This included different researches conducted by Robitschek and other investigators who had used PGIS in their research work. The review related to PGI is as follows:

Robitschek (1997) examined the effectiveness of the Life/Career Renewal Program (LCR), a wilderness program for adults, in enhancing personal growth initiative of 68 participants. Results supported the hypothesis that the LCR program enhances PGI.

Robitschek (1998) developed the construct of PGI and prepared a scale to measure PGI through three studies. Initially (in 1st study) PGIS scale was developed to evaluate the outcomes of a wilderness program for adults who were experiencing personal or vocational transitions or seeking renewal in their lives. The investigator developed the PGIS containing 9 items (containing both cognitive and behavioral items) and but the measured PGIS was unidimensional. There was no significant difference between men and women in this sample and distributions of these two groups were similar in range. The PGIS did not seem to be meaningfully related to gender, age, income or education for this sample. In second study, the stability of PGIS was tested in a sample of college students. Results of this study indicated no significant difference between men and women for the PGIS. For both groups, the PGIS was found to have moderate positive correlations with assertiveness, internal locus of control, instrumentality and moderate negative correlation with chance locus of control. In study III, temporal stability of PGIS was checked. The test-retest reliability of PGIS ranged from 0.73 to 0.84.

Robitschek (1999) conducted a study for further validation of the PGIS through relations among the ways of growing (Awareness-Unintentional, Unaware-Unintentional and Awareness-Intentional), gender role orientation, psychological well-being and PGIS. Results indicated that PGIS accounted for 49% and 29% of the variance in psychological well being scale scores for women and men respectively. Scores on PGIS were significantly negatively related to UU and AU for both women and men. For women, three ways of growing (UU, AU and AI) scores accounted for
29%, 6% and 12% of variance in PGIS scores. For men, UU, AU and AI scores accounted for 25%, 18% and 26% of variance in PGIS scores. It was also found that people who were more non-traditional in their views regarding gender roles scored high on PGIS. PGIS scores were not significantly related to traditional egalitarian sex role (TESR) scores for women but significantly related for men. The relations among the PGIS, gender roles and egalitarianism provided partial support for PGI and PGIS. Only instrumentality was significantly related to PGIS for both men and women.

Robitschek and Cook (1999) conducted a study on influence of PGI and coping style on career exploration and vocational identity in a sample of college students (107 women and 98 men). Results showed significant gender differences on PGIS such that women scored higher than men. Results also indicated that the correlation of PGI and reactive coping was significantly stronger for men than women. No significant correlation was indicated between self-exploration and vocational identity. Results revealed that PGIS was significantly and positively related to environmental exploration and vocational identity measures for men and women. A significant relation was found between PGI and self-exploration for men. For men and women, significant positive relations were found between PGIS and the reflective coping scale and significant negative relations were found between PGIS and suppressive coping scale. It was also revealed that PGI predicted environmental exploration and vocational identity. The results for both men and women suggested that college students with the higher level of PGI were likely to engage in more environmental exploration and to have more crystallized vocational identity.

Robitschek and Kashubeck (1999) examined the mediating effects of hardiness and personal growth orientation on parental alcoholism, family functioning and psychological health. They found strong support for the mediating effects of both hardiness and personal growth orientation with regard to family functioning. For both men and women, personal growth orientation appeared to fully mediate the relations of family functioning to psychological distress. Parental alcoholism had no direct effects on well-being or distress; indirect effects on well-being and distress were found through family functioning, personal growth orientation and hardiness.

Caldwell (2000) investigated a model of trauma with spirituality and religiosity; the mediating and moderating effects of personal growth initiative and openness to
experience. For women, strong positive relationships were found between personal growth initiative and religiosity, personal growth initiative and spirituality. Personal growth initiative and openness to experience each made a significant unique contribution to spirituality both for men and women. It was also revealed that Personal Growth Initiative had a significant effect on religiosity.

Whittaker and Robitschek (2001) examined the relationship between multidimensional family functioning and PGI. Three higher order family functioning clusters (Family processes, family organization and personal growth) were assessed as predictors of PGI in a sample of college students (165 men and 171 women). In hierarchical regression for men, family processes and family organization accounted for significant unique portions of positive variance in PGIS scores. Family processes cluster accounted for a larger portion of variance than did the family organization cluster. Personal growth cluster did not account for a significant unique portion of the variance in PGIS scores. For women, family process (caused greater variance) and personal growth cluster accounted for significant unique portions of the variance in PGI. The family functioning cluster accounted for 26% and 21% of the variance in PGI for men and women respectively.

Hardin, Bayer, Nixon and Robitschek (2003) conducted a study regarding the role of PGI in self-discrepancy and distress. Results indicated no significant difference was found between men and women on PGIS. There was no support for moderating effect of PGI on relations between self-discrepancies and affect. Self-discrepancies were strongly negatively correlated with PGI. Self-discrepancies mediate the relationship between PGI and affect. Results indicated that self-discrepancies mediate the relationship between PGI and depression, dejection and quiescence. PGI explained significant variance in social avoidance-distress and cheerfulness. Direct relations were found between PGI and six dependent variables (social anxiety, agitation, cheerfulness, quiescence, depression and dejection) in the absence of mediator.

Robitschek (2003) tested the validity of personal growth initiative scale scores with a Mexican American college student population. The Cronbach alpha for internal consistency was 0.86 for this sample. Results of this study indicated that there were no significant differences between men and women on any of the correlations of PGI with the cultural variables. PGIS was significantly and positively correlated with
independent self-construal. PGIS scores were significantly positively related to internal locus of control and instrumentality for Mexican American women and men, significantly positively related to assertiveness for men only, were not significantly related to age either for men or women. Chance locus of control was not significantly related to PGIS scores. Social desirability scores were significantly positively related to PGIS scores and accounted for 13% and 18% of the variance in PGIS scores for women and men respectively. The study maintained that PGI is not a culturally limited construct.

Robitschek and Hershberger (2005) conducted a study on psychological factors and gender implications for predicting expectations about counseling. Results indicated the internal consistency for PGIS in the study was 0.90. Results also revealed that personal growth orientation appeared to be an important predictor of personal commitment expectations for female clients.

Neff, Rude and Kirkpatrick (2007) examined the relationship of self compassion in relation to positive psychological functioning and personality traits. They found that the self compassion was significantly related to PGI because self compassion individuals were not harshly critical; they may be more able to acknowledge areas of weakness that need changing.

Ogunyemi and Mabekoje (2007) conducted a study on combined or relative influence of self-efficacy, risk taking behavior and mental health on PGI among university undergraduates. The findings of the study revealed that PGI was positively correlated with risk taking behaviour, self-efficacy and mental health. However, RTB, SE and MH positively correlated with one another. Risk taking and self efficacy predicted 6.6% and 2.1% of the variation in the PGI of university undergraduates respectively. The two predictors together predicted 8.7% of the variation in PGI. Risk taking behaviour was found to be better predictor than self-efficacy for PGI among university undergraduates.

Shorey, Little, Snyder, Kluck and Robitschek (2007) examined the constructs of hope and personal growth initiative. Comparison of the PGIS with Snyder et al.(1991) Hope Scale in a college student sample(N=378) with latent variable analyses using LISREL8.0 revealed that PGI and hope were distinct but related construct. Both constructs related to a selected set of outcome measures (Optimism, psychological
distress and well-being) but only hope accounted for a significant proportion of the variance in predicting these outcomes when hope and PGI were entered simultaneously in the model. When controlling for hope the PGIS did not add to the prediction of optimism and psychological distress or well-being. Cronbach alpha in this study was 0.87 for PGIS.

Martin (2009) investigated the PGI as a moderator of expressive writing tasks: test of a matching hypothesis. 159 participants were asked to complete three writing tasks within one week time period. The conditions were: the best possible self conditions and the traditional writing paradigm condition. The investigator found that higher the PGI, the greater the increase in subjective well-being in the traditional writing paradigm group as compared to best possible self-conditions at post intervention. Higher the level of PGI, decrease in depression.

Joshanloo and Ghaedi (2009) examined the psychometric characteristics of Personal Growth Initiative Scale in university students. The goal of this study was to investigate reliability, validity (construct and convergent) and gender differences of PGIS in a sample of 205 students of Tehran University (88 boys and 117 girls). All students asked to complete PGIS, positive affect, negative affect, life satisfaction, psychological and social well-being scales. Internal consistency of the PGIS was 0.87 showing that this scale had acceptable internal consistency. Results of exploratory factor analysis showed that this scale has a one-dimensional factor structure in the used sample. Correlations between this scale and convergent validity scales were significant and in the expected direction. PGIS has a one-factor structure and good reliability and validity with Iranian university students.

Robitschek, Ashton and Spering et al (2009) conducted a study to develop a multidimensional measure of PGI. The new scale was administered on different sample time and again for finding reliability of PGIS-II. The test-retest reliability of PGIS-II was found to be ranging from 0.61 to 0.77. The multidimensional measure of PGI has four dimensions namely Intentional Behaviour, Using Resources, Planfulness and Readiness for Change including cognitive as well as behavioural components. Results of the study indicated PGIS-II as a parsimonious measure that appeared to have good initial psychometric properties.
Robitschek and Keyes (2009) investigated personal growth initiative as a parsimonious predictor of mental health. Results of confirmatory factor analyses supported this 3-factor model of psychological, social, and emotional well-being, consisting of 14 sub-dimensions. Furthermore, this model was found to be invariant for men and women in both samples. Results of structural equation modeling supported PGI as a parsimonious predictor of Keyes’s multidimensional mental health model for men and women in both groups. PGI predicted all three mental health domains for both genders. Accounting for covariance among the domains, the amount of variance accounted for by PGI is striking. Approximately half of the variance in social and psychological well-being is caused by PGI.

Robitschek and Anderson (2011) conducted a study with samples of college students and found that PGI was negatively correlated with depression and other forms of distress. It was also revealed that PGI accounted for significantly more variance in several aspects of well-being and academic functioning than did level of depression symptoms.

Sharma, Garg and Rastogi (2011) explored the relationship between personality type A/B and PGI. The findings of the study provided the evidence of influence of personality type on PGI. The findings indicated that type A has positive and significant relationship with PGI, while personality type B has statistically significant negative relationship with PGI. The study also revealed that dimensions of personality type A and B played an important role in determining the PGI.

Weigold and Robitschek (2011) examined the relationships of agentic personality characteristics i.e. coping self-efficacy (CSE), hardiness and personal growth initiative and coping to trait anxiety in a sample of college students. The variance in anxiety seems to be primarily accounted for by indirect paths from PGI and CSE to anxiety through problem-focused coping, an indirect path from hardiness to anxiety through emotion-focused coping, and a direct path from avoidant coping to anxiety. The negative path between avoidant coping and anxiety was unexpected. The three personality traits seemed to relate differentially to anxiety. In the direct effects model (including the traits and anxiety), only hardiness had a direct, significant path to anxiety. The positive relations of PGI and CSE to problem-focused coping were found. The indirect relation of hardiness to anxiety through emotion-focused coping is
much stronger than are the indirect relations of PGI and CSE to anxiety through problem-focused coping. The predictor variables, particularly hardiness and PGI, are strongly and positively related, although they relate differentially to other variables.

Ayub and Iqbal (2012) conducted a study on the relationship of personal growth initiative, psychological well-being, and psychological distress among adolescents. The findings of the study suggested that personal growth initiative is positively associated with psychological well-being and negatively associated with psychological distress among adolescents. The reliability coefficient for PGIS was 0.794.

Robitschek, Ashton, Spering, Geiger, Byers, Schotts and Thoen (2012) evaluated the psychometric properties of Personal Growth Initiative Scale–II. The original Personal Growth Initiative Scale (PGIS; Robitschek, 1998) was unidimensional, despite theory identifying multiple components (e.g., cognition and behavior) of personal growth initiative (PGI). This research developed a multidimensional measure of the complex process of PGI, while retaining the brief and psychometrically sound properties of the original scale. Study 1 focused on scale development, including theoretical derivation of items, assessing factor structure, reducing number of items, and refining the scale length using samples of college students. Study 2 consisted of confirmatory factor analysis with 3 independent samples of college students and community members. Lastly, Study 3 assessed test–retest reliability over 1-, 2-, 4-, and 6-week periods and tests of concurrent and discriminant validity using samples of college students. The final measure, the Personal Growth Initiative Scale–II (PGIS-II), includes 4 subscales: Readiness for Change, Planfulness, Using Resources, and Intentional Behavior. These studies provided exploratory and confirmatory evidences for the 4-factor structure, strong internal consistency for the subscales, overall score across samples, acceptable temporal stability at all assessed intervals, concurrent and discriminant validity of the PGIS-II.

Shigemoto, Ashton and Robitschek (2012) conducted a study on how PGI related to post traumatic growth and posttraumatic stress symptoms (PSS). Results of the study indicated that PGI factors significantly predicted post traumatic growth (PTG). Also the behavioural components of PGI (using resources and intentional behaviour) each uniquely predicted PTG but the cognitive components (Readiness for change and
Planfulness) did not. It was found that when deliberative and intrusive rumination were included in the prediction model, intentional behaviour no longer predicted PTG. But using resources and deliberative rumination uniquely predicted PTG. Intentional behaviour had a positive relation with PSS but this relation was overshadowed by intrusive rumination as a strong predictor of PSS.

Theon and Robitschek (2013) developed an intervention for enhancing personal growth initiative. A one-week intervention (Intentional Growth Training; IGT) to increase personal growth initiative (PGI) was created and tested in a series of studies to determine its effect on PGI level. Because PGI predicts psychological well-being and depression, IGT has potential to have considerable benefit on a person’s mental health. The Study 1 was the initial assessment of whether IGT increased PGI greater than various control conditions. Study 2 employed an enhanced version of IGT and utilized the singular components of IGT determining which components were most impactful at increasing PGI. Study 3 was a narrative analysis of writing samples from Study 2 determining whether participant language varied by condition in use of negative or positive emotion, or personal growth-related words. Results of these studies indicated that in Study 1, PGI increased significantly across conditions. In Study 2, the growth activity only condition, and PGI education coupled with the growth activity, produced significant increase in PGI. In Study 3, those receiving only PGI education used more growth related words than control conditions. The findings of the study maintained that PGI can be increased through IGT.
STUDIES RELATED TO SELF-EFFICACY

In this section, extensive review was done regarding self-efficacy. The investigator was concerned with general or global self-efficacy (GSE) beliefs in the present study, so only those studies were included in which Sherer General Self-Efficacy Scale (SGSES) was used. The review is given below:

Sherer and Adam (1982) developed self-efficacy scale to measure efficacy beliefs of individuals. Factor analysis yielded two sub-scales: a General Self-Efficacy subscale (17 items) and a Social Self-Efficacy subscale (6 items). Positive relationships were found between self-efficacy subscale and vocational, educational and military success. Self-efficacy was found to be correlated with other personality measures like Locus of Control, Personal Control, Social Desirability, Ego Strength, Interpersonal Competence and Self-Esteem. The internal consistency coefficient of the scale was 0.86.

Sherer and Adams (1983) tested the construct validation of the Self-Efficacy Scale developed in 1982. They investigated the conceptual relationships between the self-efficacy subscales and other personality measures i.e. MMPI, Rathus Assertiveness Schedule and Bem Sex-Role Inventory. Results supported the Self-Efficacy Scale as a valid measure of expectation of personal ability to initiate and persist in behaviour.

Woodruff and Cashman (1993) reexamined the general self-efficacy scale developed by Sherer et al (1982) named as SGSES. They obtained a factor structure, based on the original 17-item scale, which represented the three aspects underlying the scale i.e. Initiative, Effort and Persistence. The three subscales had moderate, positive correlations with one another.

Bosscher and Smit (1998) conducted a study to confirm the three factor structure of SGSES given by Woodruff and Cashman (1993). Out of original 17 items, five items were deleted in an adult sample. The final scale consisted of 12 items distributed over three sub-scales i.e. Initiative, Effort and Persistence. The Cronbach’s Alpha of the total scale was 0.69 and 0.64, 0.63 and 0.64 for the subscales Initiative, Effort and Persistence respectively.
Smit and Bosscher (1998) examined the predictors of self-efficacy and mastery. Results revealed that self-efficacy and mastery intercorrelate positively. Stronger beliefs of self-efficacy were associated with younger age, a higher level of education, higher information-processing speed, less depression and a lower number of chronic conditions.

Chen, Gully and Eden (2001) conducted a study on the validation of a New GSES (NGSE) and compared it with SGSES. The internal consistency was high both for NGSE and SGSES (α=0.86 & 0.88 respectively). Principle component analysis revealed that NGSE is unidimensional and SGSES is multidimensional. NGSE scale found to have higher construct validity than SGSES.

DeWitz and Walsh (2002) investigated self-efficacy and satisfaction of college students. The study was focused on the relationship between self-efficacy (i.e., college, social, and general) and college student satisfaction. A sample of 312 undergraduates was administered measures of self-efficacy and college satisfaction. All three measures of self-efficacy were significantly associated with college satisfaction. Regression analysis and analyses of variance revealed that college self-efficacy was significantly associated with college satisfaction, whereas the other two measures of self-efficacy (i.e., social and general) did not account for any unique, additional variance.

Willis (2002) studied the self-efficacy, psychosomatic illness and psychopathology. Results indicated an acceptable level of reliability of GSES with Cronbach Alpha of 0.85 and SSES with 0.66 and regression analysis had made it clear that GSES and Somatization of emotional conflict (SECS) caused 41% of the variance in Skin Conductance Level (SCL)-90. Neither the General nor the Social sub-scale was significantly correlated with any sub-scale of the SECS or the Somatization sub-scale. It was also concluded that general self-efficacy (but not social self-efficacy) was found to be significantly negatively correlated with total psychopathology as measured by the SCL-90. General self-efficacy showed significant negative correlations with seven of the nine sub-scales: obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, and paranoid ideation. The strong correlation was found between general self-efficacy and depression. General self-efficacy was not found significantly related to somatization or psychoticism.
There were no significant relationships among self-efficacy, gender, and age. Yet, general self-efficacy was negatively related to frequency of illness.

**Hamill (2003)** examined the importance of efficacy beliefs and coping mechanisms in resilient adolescents. The analysis yielded four distinct groups: resilient adolescents, competent adolescents, maladaptive adolescents, and a low adversity/low competence group. The resilient and competent adolescents were similar in terms of self-efficacy and coping mechanisms, and the maladaptive and low competence/low adversity group scored lower on these measures than the resilient and competent groups. Self-efficacy and the ability to articulate coping responses were important personality characteristics that distinguished the resilient group from the maladaptive youths as predicted. Internal control, response to stress, persistence and the ability to select positive coping options did not differ across the four groups, leading to the possibility that these characteristics may serve a less important role in the development of competence in the face of adversity.

**Lim and Loo (2003)** demonstrated the relationship among parental job insecurity, authoritarian parenting behaviour, and youth’s self-efficacy and work attitudes. It was revealed that self-efficacy was positively associated with youth’s work attitudes. Results suggested that parental job insecurity was significantly and positively associated with paternal authoritarian parenting behaviours while maternal job insecurity was significantly negatively associated with authoritarian parenting behaviours. Paternal and maternal job insecurity was significantly and positively associated with children’s perceptions of paternal and maternal job insecurity. Relationship between paternal authoritarian parenting behaviours and youth’s self-efficacy was not statistically significant while maternal job insecurity was significantly and negatively associated with youth’s self-efficacy. Perceived paternal and maternal job insecurity was negatively associated with youth’s self-efficacy. Results also revealed that youth’s self-efficacy was significantly and positively associated with their work attitude.

**Kuan, Jin and Lai Oon (2005)** studied the self-esteem and self-efficacy of pet owners and non-pet owners. Results revealed no significant difference in self-esteem and self-efficacy of both the groups. Despite the insignificant results, there was a slight trend where pet owners, as compared with non-pet owners, had slightly higher
self-esteem and self-efficacy. Results showed that 33% of the variance in predicting self-efficacy was contributed by self-esteem.

Scherbaum, Charash and Kern (2006) examined the reliability and item parameters of three measures of GSE i.e. SGSES (Sherer, 1982), GPSES (Schwarzer & Jerusalem, 1995) and NGSES (Chen et al., 2001). The internal consistency coefficients for SGSES, GPSES and NGSES were 0.88, 0.85 and 0.85 respectively. Across all three measures, the item response theory indicated that the items on these measures function fairly well and demonstrated many desirable psychometric properties. Chen et al. (2001) NGSES outperformed the others in terms of item discrimination, item information and the relative efficiency of the test information functions.

Almudever, Belz and Hajjar (2007) investigated the moderating role of perceived self-efficacy (PSE) on the effects of mismatches between expectations and actual work conditions on newcomer integration behaviour among teachers who just had joined the schools. For teachers having low and high degree of exchanges between areas of life, there was no statistically meaningful correlation between the independent variables (perceived mismatches and PSE) and the variable to be explained (integration behaviour). There was a positive and negative correlation between the two types of information seeking (inquiry and monitoring) for low and high degree exchanges between areas of life respectively. For teachers having moderate degree of exchanges between areas of life, a negative correlation between direct information seeking and monitoring was found. Moreover, a high level of PSE was linked to less intensity in innovative behaviours and information seeking through monitoring. Finally, the negative mismatches between expectations and actual work conditions, whether in terms of work characteristics or required skills, were associated with a lower PSE level.

Imam (2007) examined the dimensionality, internal consistency and temporal stability of Sherer et al General Self-Efficacy Scale (SGSES). Results exhibited acceptable levels of internal consistency, temporal stability and construct validity. Results of the study confirmed the three-factor structure of the scale. Results indicated no significant difference between men and women on SGSES. The Cronbach Alpha was 0.85 and test-retest reliability was 0.32 to 0.66. Results also confirmed the three factor structure which showed that SGSES is multidimensional.
Lampert (2007) investigated the relationship of self-efficacy and self-concept to academic performance in a college sample. In this study, all measures used had good to high reliability levels. The College Academic Self-Efficacy Scale (CASES) demonstrated good internal consistency with a Cronbach alpha coefficient of 0.87. The general scale of the SES has good internal consistency with a Cronbach alpha coefficient of 0.83. The social scale of the SES has good internal consistency with a Cronbach alpha coefficient of 0.66. The academic self-efficacy (ASES) had good internal consistency with a Cronbach alpha coefficient of 0.66. It was revealed that ASES, GSES, SSES and CASES was a good predictor of actual Grade Point Average (GPA) and explained 18% of the variance in GPA. In fact, academic self-efficacy, which was a specific construct, was a better predictor of GPA than academic self-concept or general self-efficacy. CASES and the social self-efficacy scale were also found to be correlated with actual GPA.

Friston (2008) studied the impact of journaling on students’ self-efficacy and locus of control. A 2x3 mixed-design ANOVA was calculated to examine the effects of journaling (CBT or non-CBT) and time (beginning of course, midterm and end of course) on self-Efficacy. The main effect for time was significant but the main effect for type of journaling was not significant. The interaction between type of journaling and timing was not significant. For the main effect of time, a repeated measure ANOVA indicated that the significant change occurred from the beginning of the semester to the midterm test regarding Self-Efficacy. The results of the ANOVA indicated no significant differences between the midterm and end-of-semester measures. The results indicated a significant positive change in self-efficacy in all participants in the study, regardless of the type of journaling. Further, the results showed the change was most significant at midterm, and there was not a significant change in self-efficacy between the midterm and end of the semester. Additional ANOVAs examining the impact of journaling (CBT or non-CBT) by timing (beginning, midterm and end of the semester) on locus of control, perception of the instructor, course evaluation, and grades did not show any significant differences between groups or time.

Brewer (2009) studied comparatively the social interest and self-efficacy levels among High School mentors and their non-mentor peers. Results indicated a statistically significant difference in SSE subscale scores between mentors and non-
mentors, when a directional comparison was made, with mentors obtaining higher scores. In examining the GSE subscale scores, no significant difference was found between mentor and non-mentor scores. This finding indicated that students who volunteer for mentoring programs may have higher levels of social self-efficacy, but do not necessarily differ from their non-mentor peers with respect to general self-efficacy beliefs. There was no significant relationship between social or general self-efficacy beliefs and social interest levels within the mentor students. There were no significant differences in SSE or GSE subscale scores between male and female participants.

DeWitz, Woolsey and Walsh (2009) explored the relationship between self-efficacy and purpose in life among college students. Results indicated the Cronbach alpha for SGSE was 0.86. No significant difference was found between male and female in any of the variable. All the variables of self-efficacy i.e. GSE, social self-efficacy and college self-efficacy were significantly and positively correlated with purpose in life. General self-efficacy was the most significant predictor for purpose in life which accounted for 41% of the variance in purpose in life and social and college self-efficacy accounted for an additional 1% and 5% of the variance in purpose in life.

Simmons, Niemann and Miller (2009) examined the reliability of Self-Efficacy and Locus of Control Scales for students with mild disabilities. Results revealed that the reliability coefficient was 0.719. The scales were only marginally reliable for this group of mildly disabled students.

Singh and Udainiya (2009) investigated the effects of type of family and gender on self-efficacy and well-being of adolescents. Results revealed a significant effect of type of families on initiative dimension of self-efficacy. Adolescents belonging to joint families were found to be higher than nuclear families on the initiative dimension. Male participants of joint family showed higher initiative than female participants and female participants of nuclear family showed higher initiative than male participants. Results revealed a significant effect of gender on effort dimension of self-efficacy. The boys were found to be superior as compared to girls on this dimension. Results showed the significant effect of type of families on the persistence dimension of self-efficacy. Adolescents living in joint families scored higher than to adolescents living in nuclear families. The interaction between type of family and gender was also found to be significant.
Frank, Plunkett and Otten (2010) examined whether Iranian American adolescents’ perceptions of parental support, parental knowledge and parental psychological control relate to general self-efficacy directly and indirectly through positive self-esteem and self-deprecation. Results indicated that positive esteem was positively related to GSE while self-deprecation, was negatively related to GSE. It was also revealed that mothers’ and fathers’ support and knowledge were significantly and positively related to GSE and positive esteem. It was also found that mothers’ and fathers’ psychological control were significantly and negatively related to general self-efficacy and positive self-esteem but positively related to self-deprecation. Furthermore, the parenting variables were indirectly related to general self-efficacy through either positive esteem or self-deprecation. The findings indicated a much stronger relationship between self-deprecation and general self-efficacy.

Khodarahimi (2010) conducted a study on the general self-efficacy and worry in an Iranian adolescents and youths samples. Results demonstrated that general self-efficacy and worry had significant negative correlation coefficient in adolescents and youths. It was also found that GSE and its initiation subscale, worry and its subscales except vocational subscale were significantly and linearly related in adolescents. Persistence subscale of GSE and worry subscales except economic, self-esteem and vocational subscales were significantly and linearly related in adolescents. There were not any significant correlations between effort subscale of GSE and worry subscales in adolescents and youths. Similarly GSE and its initiation subscale, worry and its subscales were significantly and linearly related in youths. Persistence subscale of GSE had a significant negative correlation with worry and its subscales except insecurity. Initiation and persistence subscales of general self-efficacy explained 42 and 45 percent of worry variation in adolescents and youths respectively.

Gebara (2010) conducted a correlational study between general self-efficacy and course satisfaction in online learning. Younger female students reported higher levels of self-efficacy with the majority of total respondents having completed four or more online courses. Correlations between effort and capability in self-efficacy were found as well as future enrollment and learning needs. Instructor presence had a significant impact on overall course satisfaction and future enrolment. No significant relationship between general self-efficacy and course satisfaction was noted in this study.
Yildirim and Ilhan (2010) examined validity and reliability of the Turkish form of Sherer General Self-Efficacy Scale (SGSES). The three factor structure (Effort, Initiative and Persistence) the scale explained 41.5% of the observed variance. Correlations between SGSES and the other measures were statistically significant. The Cronbach alpha for the entire scale was 0.80 and the test-retest reliability coefficient was 0.69. The self-efficacy scale was found to be a reliable and valid instrument for the assessment of general self-efficacy in individuals 18 or above age group.

Ahmed, Qazi and Jabeen (2011) studied self-efficacy as predictor of educational performance among university students. Findings of the study established a weak positive association between level of self efficacy and perceived academic performance as self-efficacy caused 3.6% of variance in academic performance. There was found weak positive correlation between self-efficacy and academic performance. There was a significant effect of students' level of self-efficacy on their perceived academic performance.

Dehghani, Sani, Pakmehr and Malekzadeh(2011) examined the relationship between students’ critical thinking and self-efficacy beliefs in Ferdowsi University of Mashhad, Iran. Findings showed a significant positive relationship between students’ self-efficacy and critical thinking. There was a significant difference between girls’ and boys’ self-efficacy and girls were found to score higher than boys on self-efficacy scale. Results also revealed no significant difference between girls’ and boys’ critical thinking.

Jamshidi, Pool and Khoshkordi(2012) analyzed the direct and indirect impact of emotional intelligence on employees’ self-efficacy using the SEM at the University of Isfahan. Results indicated that emotional intelligence has a positive and significant impact on employees’ self-efficacy. Five dimensions of emotional intelligence i.e. self-awareness, self-regulation, self-motivation, sympathy and social skills had a positive and significant impact on employees’ self-efficacy.

Sahranavard, Hassan, Elias and Abdullah (2012) studied the role of gender in student’s psychological factors and science performance. Hierarchical Multiple Regression was employed in examining the effects of moderator variable (gender) on the relationships between the independent (general self-concept, science self concept,
self-efficacy, science self-efficacy, self-esteem, and anxiety) and dependent (science performance) variables. Results indicated that the moderating effect of gender explained 0.9% of variance in science performance above and beyond the variance explained by general self-concept, science self-concept, self efficacy, science self-efficacy, self-esteem, anxiety. The result suggested that the gender was not important for moderating the relationships of general self-concept, science self-concept, self-efficacy, science self efficacy, self-esteem and anxiety with science performance.

**Jahanian and Mahjoubi (2013)** conducted a study on the rate of self-efficacy's effect on university students' academic achievements in Iran. The findings of the study indicated that there was a positive and meaningful relationship between students' self-efficacy and their academic achievements at very high, high, middle, low and very low level. Further, it was also revealed that self-efficacy variable determined 43%, 38%, 10%, 28% and 39% of changes in students' academic achievements at very high level, at high level, at middle level, at low level and at very low level respectively.

**Shriatnia, Mirdoraghi, Pakmehr and Iravani (2013)** conducted a study on the relationship of hardiness and self-efficacy with mental health among students in Ferdowsi University of Mashhad, Iran. Results of the study indicated a positive and meaningful relationship between hardiness and mental health. It was also revealed that hardiness was a predictor of mental health so that 0.19 percent of variance of mental health of male students was explanatory by hardiness. The findings also indicated that there was a positive and meaningful correlation between self-efficacy and mental health. Self-efficacy emerged as a predictor for mental health of female and male students so that 0.25 percent of mental health of females was explanatory through self-efficacy. Thus, results made it clear that for girls, self-efficacy and for boys, hardiness were better predictors.
SECTION-2.3

REVIEW RELATED TO RISK-TAKING BEHAVIOUR

After reviewing extensive literature regarding the Risk-Taking Behaviour, the investigator had taken only those studies in which DOSPERT scale as given by Weber et.al. was used to assess the risk taking behaviour. The review related to RTB is as follows:

Weber, Blais and Betz (2002) measured risk perception and risk behaviours through Domain-specific Risk-attitude Scale containing 40 items. Respondents' degree of risk taking was highly domain-specific, i.e. not consistently risk-averse or consistently risk seeking across all content domains. Women appeared to be more risk-averse in all domains except social risk. A regression of risk taking (likelihood of engaging in the risky activity) on expected benefits and perceived risks suggested that gender and content domain differences in apparent risk taking were associated with differences in the perception of the activities' benefits and risk, rather than with differences in attitude towards perceived risk. Men were significantly more likely to engage in most risky behaviors than were women with the exception of social risks, where women reported significantly greater risk taking. They found that for a given participant, the level of apparent risk taking varied across risk domains yet his (her) domain specific levels of perceived risk and benefits together explained a significant proportion of this variability and for the great majority of respondents, the relationship between apparent risk taking and risk perceptions across domains was negative or neutral, suggesting perceived risk aversion. The test-retest reliabilities for Risk-Behaviour Scale were computed and correlations were low for Financial and Social subscale (0.44 & 0.58 respectively) but respectable for the Health, Ethics and Recreational sub­ scales (0.75, 0.72 and 0.80 respectively). In this study, it was established that risk­ taking is domain-specific.

Johnson, Wilke and Weber (2004) conducted a study on risk-taking with risk-return framework in German sample. The findings indicated that the item-total correlations for the risk-behaviour, risk-perception and expected benefits were 0.80, 0.83 and 0.81 respectively. It was revealed that German males were significantly more likely to engage in the risky behaviours, perceived the risk of these behaviours to be lower and expected the benefit of engaging in these behaviours to be higher, when compared to
German females in all the domains except the social domain. In the social domain, male and female did not differ significantly. German male and female perceive risk in the health and ethical domains as less severe. It was also found that domain specific risk-taking in one showed very little relationship to risk taking in other domains. Results of regression analysis indicated that risk perception and expected benefit as predictor variables was able to explain up to 58% of the respondent and domain variance in the likelihood of engaging in risky behaviours.

Nicholson, Soane, O’Creevy and Willman (2005) conducted a study on personality and domain-specific risk-taking. The findings of the study revealed that men reported significantly greater risk taking than women in four domains, including the health and safety-oriented domains, and in the overall risk-taking scale. Women, however, took greater risks in the career and social domains. It was also found that risk taking decreased with age in every domain. There were fewer significant associations between risk taking and age for women than men, reflecting less of a change in risk taking with age and an overall lower level of reported risk taking for the women. In the domain of health risk taking there was a direct relationship with neuroticism, in contrast to the inverse relationship found in the other domains. Results of the study indicated that risk propensity was associated with sex, age and with objective measures of career-related risk taking (changing jobs and setting up a business).

Blais and Weber (2006a) proposed a revised version of the original Domain-Specific Risk-Taking (DOSPERT) scale developed by Weber, Blais, and Betz (2002) that was shorter and applicable to a broader range of ages, cultures, and educational levels. Results of the study indicated the Cronbach Alpha associated with 30 items English risk-taking scores ranged from 0.71 to 0.86 and those associated with the risk perception scores from 0.74 to 0.83. Results also revealed that the mean risk perception level varied significantly between domains across individuals. The greatest mean level was found in the health/safety area whereas lowest was found in the social domain. Across domains, the participants in the French group reported a greater mean level of perceived risk than their English counterparts (difference was significant in financial, health/safety and recreational domain). The mean risk taking level also varied significantly between domains (with the greatest mean level in social area and lowest in ethical domain). It was also revealed that the respondents in French group reported more likely to engage in risky behaviours than the English group respondents.
Blais and Weber (2006b) tested invariance in risk taking between Anglophone and Francophone groups. Results indicated the stability of five factor structure of DOSPERT within the diversified samples of respondents. The internal consistency estimates associated with 30 items of DOSPERT risk taking scores was from 0.71 to 0.86. The greatest risk perception levels were found in health/safety area and lowest in social domain. Conversely, the greatest behavioural intentions were in social domain and lowest in ethical domain. It was also revealed that the Anglophone were significantly higher in risk taking tendencies than the Francophone groups.

Hanoch, Johnson and Wilke (2006) recognized heterogeneity of risk profiles among experimental samples and introduced a new methodology that took this heterogeneity into account. Along with gender, they targeted the relevant subsample related to specific domains i.e. Athletes, Gamblers, Investors, Smokers and Gym Members. The research showed that individuals who exhibited high levels of risk-taking behavior in one content area (e.g., bungee jumpers taking recreational risks) could exhibit moderate levels in other risky domains (e.g., financial). It was found that there was a main effect of domain, as well as an interaction between domain and subsample. Furthermore, in the recreation, gambling, and investment domains, t tests showed that the mean score of the associated subsample was significantly higher than the mean across all remaining subsamples. In the health domain, results indicated that the subsample of smokers had a higher mean score and the subsample of gym members a lower mean score, than the mean across the remaining subsamples. It was also revealed that male were more risk takers than females in all the domains. It was established that propensity to take risks is largely mediated by the perceived benefit of the activity, and to a lesser extent by the perceived risk.

Harris, Jenkins and Glaser (2006) examined gender differences in risk assessment. Results of the study revealed that men reported a greater overall likelihood of engaging in risky behaviours in the gambling, health and recreational domains. In all the three domains, women judged potential negative consequences as more likely to occur and they judged the potential negative consequences as significantly more severe in two of these domains (gambling and health). The gender also significantly differed in their ratings of the enjoyment of engaging in risky behaviours (assuming no negative outcome) in all the three domains while men rating the scenarios as more enjoyable. Significant associations between predicted and actual behaviour were found
in the health domain. Reports of likelihood of engaging in risky behaviour in the social domain were significantly associated with the past socially risky behaviours. There was a weak negative relationship between evaluations of enjoyment associated with an activity and probability and the severity of potential negative outcomes. The meditational analyses revealed that perceptions of negative consequences and enjoyment significantly partially mediated gender differences in likelihood of engaging in risky behaviours.

Davis (2008) measured risk taking among college students using DOSPERT. Results of the study revealed the slight differences in risk taking between traditional (students in the age range 18-22 years were called as traditional) and non-traditional students (students above 22 years were called as non-traditional). The non-traditional students showed a greater degree of risk taking in only the social domain, but remained lower in all other domains than their traditional college counterparts and viewed financial and ethical risks as less risky as compared to their traditional counterpart. The results showed that there was a significant difference in risk perception between the two groups, but not necessarily so in risk taking. The only domain to show a significant difference also in risk perception was social.

Deck, Lee, Reyes and Rosen (2008) Results indicated that men are more prone to take risk in the context of recreation, health/safety, and gambling and the willingness to take risk seemed to be decreasing with age across all the domains. It was also found that mother’s education decreases the willingness to take risk across all the domains, although not statistically significant. The results indicated that, after controlling for risk attitudes, gender is significant for the Holt and Laury task and the hypothetical survey elicitation methods. It was also found that men were more risk averse and age and mother’s education had impact behavior, but only in Deal or No Deal Task. Results established that personality had impact on risk aversion.

McIntyre and Platania (2009) studied how choices are made in an in-group setting involving social pressure and risk. Results indicated alpha of 0.83 for the risk-taking subscale and 0.86 for risk-perception subscale. Results provided strong evidences for socialization as a moderator in the relation between risk and outcome perception. Group size differences appeared to be a function of risk but only for groups of three. Participants did not discern any noticeable differences in risk and associated
consequences between group of four and nine. Multiple regression analysis was used to determine the predictive ability of the DOSPERT risk-taking and risk perception on dependent variables. Neither the risk-taking nor the risk-perception subscales predicted willingness to attend the event or participants’ perceptions of the expected consequences associated with attending the events.

Morsunbul(2009) examined whether risk taking and attachment are interrelated. The findings of the study revealed that male had higher risk taking than females. In terms of attachment style, it was found that fearful and preoccupied attachment styles had higher risk taking scores than secure and dismissing attachment styles. There was also found significant attachment and gender interaction effect for risk taking behavior. It was investigated that there was significant difference between males and females in secure attachment dimension. In fearful attachment dimension, females got higher scores than males. In preoccupied attachment dimension, males got higher scores than females and no significant difference was observed between males and females in dismissing attachment dimension.

Foster, Shenesey and Goff (2009) tested the roles of perceived risks and benefits of risky behaviours in taking risks among narcissists. It was found that risk-taking was significantly predicted by benefit perception. The scores on Narcissistic Personality Inventory were positively correlated with risk-taking. It was also found that narcissism was positively linked to perceived benefits but unrelated to perceived risks stemming from engagement in risk-taking behaviour. Results of the study suggested that narcissism positively predicts propensity to engage in risk-taking behaviors as well as perceptions of benefits derived from risky behaviours. In contrast, narcissism did not predict perceptions of risk associated with risk taking. Results also indicated that narcissists appreciated the risks associated with risky behaviours just as much as do less narcissistic individuals.

Weber and Blais (2009) evaluated the psychometric properties of DOSPERT developed by Weber (2002). They conducted exploratory factor analysis and failed to replicate the six factor structure. Most of the Ethical and Health/Safety items loaded on a single factor. The gambling, Investing, Recreational and Social risk taking items loaded on distinct factors. The mean risk-taking and risk-perception subscale scores were significantly and negatively correlated. It was also found that the risk-taking subscale scores were inter-correlated.
Franco and Angelo (2010) examined the risk-taking behaviour with expected benefits and risk perception between entrepreneurs and civil servants by using Italian version of DOSPERT. The data showed good reliability in recreational, social and ethical domains (0.75, 0.73 & 0.73 respectively) and respectable correlation for health domain (0.56) and lower correlation for investment domain (0.36). It was found that civil servants engaged more frequently in risk behaviour than entrepreneurs. Moreover, male entrepreneurs engaged in investment risk behaviour more than male civil servants. It was also revealed that male civil servants engaged more frequently in recreational behaviour than male entrepreneurs. It was also investigated that males had less risk perception than female in financial domain. Female civil servants perceived financial decision more hazardous than female entrepreneur. No interesting differences were in social domain, while male perceived health decision less risky than females. It was also found that female entrepreneurs expected more benefits than female civil servants in all social, recreational and health domains.

Soane, Dewberry and Narendran (2010) conducted a study to determine whether or not different domains of risk taking would be affected by personality and perceptions of costs and benefits. It was found that personality affected the social, ethical, recreational and financial sub-categories of risk taking and perceptions of costs and benefits directly affected the social, ethical, recreational and financial domains of risk taking.

Lang (2011) compared three different risk-taking measures i.e. DOSPERT, BART and TCU Self-Rating Scale. They found four significant negative correlations across measures. Correlations were found between the DOSPERT Health/Safety sub-scale and the TCU Self-Rating Form, Decision Making Confidence sub-scale, between the DOSPERT Average and the TCU Self-Rating Form, Decision Making Confidence sub-scale, between the DOSPERT Recreational sub-scale and the TCU Self-Rating Form, Decision Making Confidence sub-scale and between the TCU Self-Rating Form, Anxiety sub-scale and the average pumps per balloon on the BART. The essence of the study was that the three measures were not measuring the same types of risk-taking as there were not many correlations found between the DOSPERT, the TCU Self-Rating Form and the BART.
Mishra and Lalumiere (2011) investigated the associations between personality and behavioral measures of risk. Results revealed that personality measures associated with risk-propensity were highly and significantly inter-correlated. It was also found that risky personality and variance preference were significantly and positively correlated suggesting that there was an association between personality traits associated with risk and behavioural preference for risky outcomes. It was also revealed that various measures of personality traits associated with risk were highly and significantly inter-correlated.

Weller and Tikir (2011) predicted domain specific risk taking with the HEXACO personality structure (Honesty/Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and openness). They reported unique patterns of domain specific relations between the HEXACO dimensions and risk attitude. Openness influenced risk taking in the social and recreational risks whereas lower honesty/humility was associated with greater health, safety and ethical risk taking. It was found that health/safety risk domain explained 39% of the variance in risk taking. Honesty/Humility and conscientiousness had significant direct effects on risk taking. Ethical risk domain accounted for 49% of the variance in risk taking and showed only three HEXACO dimensions (honest/humility, emotionality and conscientiousness) to influence risk-taking. A negative correlation was found between risk taking and perceived benefits for all risk domains and with risk perceptions for the health/safety and ethical domains. Results of the study also indicated that across all risk domains, the emotionality dimension was associated with heightened risk perceptions and high conscientiousness was associated with less perceived benefits.

Hu and Xie (2012) validated the Domain-Specific Risk-Taking Scale in Chinese college students. Results of the study indicated that Cronbach alphas ranged from 0.63 to 0.80. In this study, gender differences were found in ethical and health/safety domains. Men were more likely to engage in risky behaviours than were women in ethical and health/safety domain as well as total scores. It was also found that the apparent risk taking and perceived risk differed across domains.

Szrek, Chao, Ramlagan and Peltzer (2012) compared four different risk-taking propensity (one item survey question by Dohmen; Gambling risk taking by Holt & Laury; BART and DOSPERT) measures on their ability to describe and to predict
actual risky behaviour in the domain of health. It was found that Dohmen survey question of general risk taking propensity was a good predictor of actual risky health behaviour. HL and BART measures did not predict risky behaviour in the domain of health. The DOSPERT scores showed relatively low willingness to take hypothetical risks, although participants were more willing to take non-health risks than health risks. It was found that HL and BART were not correlated with any of the actual risk-taking behaviour. The DOSPERT-health measure was correlated with actual smoking, problem drinking and seat-belt non-use and the DOSPERT-nonhealth measure was not correlated with any of actual risky health behaviours. The correlations between Dohmen, HL, and BART were not statistically significant but Dohmen was fairly correlated with the DOSPERT measure. Some of the DOSPERT measures were correlated with HL at the 10% level. It was also established that Dohmen measure was a statistically significant predictor of problem drinking and seat belt non-use. The HL and BART were not significant predictors of any of the health behaviours. Although DOSPERT-general and the DOSPERT-nonhealth measures did not predict actual risky behaviours, the DOSPERT-health measure was highly predictive of seat belt non-use and almost predicted smoking and problem drinking.

Keinan and Meyer (2012) conducted a study on passive risk taking in everyday life. They developed a scale measuring personal tendency for passive risk taking (PRT), validated it using a 150 undergraduate student sample, and obtained three factors indicating separate domains of passive risk taking: risk involving resources, medical risks and ethical risks. Results of the study indicated a positive relation between PRT scale and DOSPERT. The DOSPERT scale was positively correlated with sensation seeking demonstrating that they measure common domains of risk taking. The PRT scores were not correlated with sensation seeking. There was an effect of gender in the medical and ethical components of the PRT, demonstrating with women taking less passive risks than men in these domains. All the components except the social domain of DOSPERT were significantly negatively correlated with gender. The general DOSPERT score was not significantly correlated with procrastination. In this study, Passive Risk Taking emerged as a new construct in decision making.

Mishra and Sritharan (2012) conducted a study on personality and behavioural outcomes associated with risk taking. Results of the study indicated that all of the risky personality measures i.e. Sensation Seeking Scale, Eysenck’s Impulsivity Scale,
Retrospective Behavioural Self-Control Scale and DOSPERT were significantly correlated. It was also revealed that rated risky personality was, on average, significantly correlated with measured risky personality, future discounting and problem gambling and marginally correlated with general gambling tendencies. It was also investigated that men exhibited higher risk taking than women and possessed higher levels of personality traits associated with risk.

Romero et.al.(2012) examined the psychometric properties of the Ten Item Personality Inventory(TIPI) in a Spanish sample. It was found that extraversion, conscientiousness and openness were strongly related to Risk-taking. The Cronbach Alpha for DOSPERT in the study was 0.86 and also revealed that the TIPI exhibited reasonably acceptable psychometric properties for measuring personality.
In this section, review related to mental health was given. After reviewing so many studies on mental health, only those studies were included in which Mental Health has been operationally defined as given by Keyes. The literature related to mental health is given below:

**Keyes (2002)** investigated mental health as a continuum ranging from languishing to flourishing in life. Findings revealed that 85.9% of adults did not have a depressive episode and only 17.2% of adults who did not have depression were flourishing, 56.6% were moderately mentally healthy and 12.1% of adults fit the criteria for languishing. It was also revealed that 28% of the languishing adults had major depression, while 13.1% of adults with moderate mental health and 4.9% of the flourishing adults had a major depressive episode during the past year. It was also found that about 64% of languishers, 55% of depressed only adults and 69% of the languishing adults (having major depression) reported a severe activity limitation. It was also investigated that about 2% of languishing, 2.5% of depressed and 12% of languishing adults with major depression had a severe level of workdays lost due to mental health. Only 0.5% of the moderately mentally healthy and none of the flourishing adults had a level of workdays lost due to mental health. Multivariate analyses revealed that languishing and depression were associated with significant psychosocial impairment in terms of perceived emotional health, limitations of activities of daily living, and workdays lost or cutback. Flourishing and moderate mental health was associated with superior profiles of psychosocial functioning.

**Keyes (2005a)** investigated the complete state model of health. Confirmatory factor analysis supported the hypothesis that measures of mental health (i.e., emotional, psychological, and social well-being) and mental illness (i.e., major depressive episode, generalized anxiety, panic disorder, and alcohol dependence) constitute separate but correlated axes of unipolar dimensions. It was found that about 17% of the individuals were having complete mental health, 50% were having moderate mental health and nearly 10% were languishing. It was also revealed that 22.9% of adults revealed that who had any of the four mental illnesses, 7% were also languishing whereas 15.9% had a pure form of mental illness and they were having moderate mental health or was flourishing.
Keyes (2005b) investigated whether mental health is a potential protective factor against chronic physical conditions and aging. The study was based on the hypothesis that complete mental health is a protective factor against, while mental illness is a risk factor for, chronic (physical) conditions with age. Mental health is conceived of as a syndrome of subjective wellbeing consisting of symptoms of hedonic (positive feelings toward life) and eudemonia (positive functioning in life). A categorical diagnosis of the presence of mental health, described as flourishing, and the absence of mental health, characterized as languishing, are described and applied to data from the MIDUS study of 3,032 adults, 25-74 years old. Data were also collected regarding 12-month prevalence of major depressive episode (MDE), and complete mental health is the absence of any of MDE and the presence of flourishing. Descriptive findings revealed a strong association of the complete mental health diagnostic categories with 23 of the 27 self-reported chronic conditions. In multivariate regression, quantity of chronic disease increased with age and was higher among moderately mentally healthy and adults with MDE, compared with the completely mentally healthy. Chronic conditions increased exponentially with age among adults with pure languishing and adults with languishing and a MDE. At all ages, completely mentally healthy adults reported the fewest chronic conditions, suggesting it may act as a protective factor in aging.

Keyes (2006) investigated whether America’s youth is flourishing or not. The findings of the study revealed that approximately 38 percent of the youth were flourishing, 56 percent were moderately mentally healthy, and only 6 percent were languishing. It was also found that depressive symptoms decreased as mental health increased; languishing youth reported 10.9, moderately mentally healthy youth reported 3.4, while flourishing youth reported an average of 1.4 depressive symptoms. It was also exposed that languishing youth reported 2.7 times as many depressive symptoms as moderately mentally healthy youth, and over 7.4 times as many depressive symptoms as flourishing youth. Moreover, moderately mentally healthy youth reported 2.8 times as many depressive symptoms as flourishing youth. The findings indicated a consistent and linear relationship between conduct problems and level of mental health. It was revealed that all conduct problems (arrest, skipped school, smoking cigarettes or marijuana, alcohol or inhalant use) are more prevalent among languishing youth than moderately mentally healthy youth. It was found that flourishing youth reported the highest levels on all four measures of psychosocial
functioning(self-Concept, Self-Determination, Close to people and Perceived School Integration and Quality), while languishing youth reported the lowest levels on all four measures.

Keyes (2007) gave a complementary strategy for improving national mental health. The article summarized the conception and diagnosis of the mental health continuum, the findings supporting the two continua model of mental health and illness, and the benefits of flourishing to individuals and society. Completely mentally healthy adults—individuals free of a 12-month mental disorder and flourishing—reported the fewest missed days of work, the fewest half-day or greater work cutbacks, the healthiest psychosocial functioning (i.e., low helplessness, clear goals in life, high resilience, and high intimacy), the lowest risk of cardiovascular disease, the lowest number of chronic physical diseases with age, the fewest health limitations of activities of daily living, and lower health care utilization. However, the prevalence of flourishing was barely 20% in the adult population, indicating the need for a national program on mental health promotion to complement ongoing efforts to prevent and treat mental illness. Findings reveal a Black advantage in mental health as flourishing and no gender disparity in flourishing among Whites.

Keyes, Wissing, Potgieter, Temane, Kruger and Van Rooy (2008) evaluated the psychometric properties of MHC-SF in Setswana-speaking South Africans. Results of factor analysis revealed that the MHC-SF replicated the three factor structure of emotional, psychological and social well-being found in US sample. The internal consistency coefficient of the overall MHC-SF was 0.74. The total score on the MHC-SF correlated 0.52 with a measure of positive affect, between 0.35 and 0.40 with the measures of generalized self-efficacy and satisfaction with life and between 0.30 to 0.35 with the measures of coping strategies, sense of coherence and community collective self-efficacy. The total score on MHC-SF correlated -0.22 with the total score on the GHQ. Criteria for the categorical diagnosis were applied and findings revealed that 20% were flourishing, 67.8% were moderately mentally healthy and 12.2% were languishing. Results of CFA supported the hypothesized two-continua model of mental health and mental illness found in the USA.

Joshanloo and Nosratabadi (2009) conducted a study on mental health continuum and personality traits. The findings suggested that 17.9% students were flourishing, 66.5% were found to be moderately mentally healthy and 15.6% students were found
to be languishing. Findings also revealed that respondents with different levels of mental health differed significantly on four of the five personality traits (extraversion, neuroticism, conscientiousness, and agreeableness). The three groups did not differ on openness to experience score. Results of discriminant analysis showed that neuroticism discriminated most strongly between the flourishing and languishing groups. It was also revealed that high extraversion and high conscientiousness differentiated from those who were languishing. It was also found that individuals who were moderately mentally healthy scored higher on Agreeableness than languishing individuals and lower on Extraversion than flourishing individuals.

Strumpfer, Hardy, Villiers and Rigby (2009) conducted an exploratory study related to organizationally relevant variables and Keyes's Mental Health Continuum Scale. Organizationally relevant variables included personally linked variables (Job Satisfaction, Job related Self-Efficacy, Performance Orientation, Proactive Personality) and organizationally linked variables (Resistance to Change, Affective Commitment, Continuance Commitment, Normative Commitment & Perceived Organizational Support). The predictor scores were reduced to three factorial scores labeled as positive orientation, negative orientation and positive striving. The positive orientation factor correlated significantly with emotional well-being, social well-being and total mental health. The negative orientation factor correlated significantly and negatively with psychological and social well-being and total mental health. The positive striving factor showed correlations with psychological well-being and total mental health.

Keyes and Annas (2009) conducted a study on feeling good and functioning well in life. They re-analyze data from Keyes (2005b) paper on mental health and found that nearly half (48.5%) of the MIDUS national sample was high Hedonic well-being. However, only 18% were flourishing which required a high level of hedonic and eudemonic well-being. The remaining 30.5% with high hedonic well-being but moderate eudemonic well being had nearly twice the rate of mental illness as flourishing individuals. It was established that the mental health continuum differentiated level of functioning among individuals with a mental illness and as well as individuals without a mental illness.

Keyes, Dhingra and Simoes (2010) investigated the change in the level of positive mental health as a predictor of future risk of mental illness. The investigators analyzed
data from the 1995 and 2005 Midlife in the United States cross-sectional surveys, which measured positive mental health and 12-month mental disorders of major depressive episode, panic, and generalized anxiety disorders. Results indicated that population prevalence of any of 3 mental disorders and levels of mental health appeared stable but were dynamic at the individual level. Fifty-two percent of the 17.5% of respondents with any mental illness in 2005 were new cases; one half of those languishing in 1995 improved in 2005, and one half of those flourishing in 1995 declined in 2005. It was found that change in mental health was strongly predictive of prevalence and incidence of mental illness in 2005. It was also revealed that gains in mental health predicted declines in mental illness, supporting the call for public mental health promotion; losses of mental health predicted increases in mental illness, supporting the call for public mental health protection.

Strofer (2010) studied the relationship between mental health and rheumatism. Results indicated that compared to the general Dutch population more people of our sample were languishing (difference: 5.7%) as well as flourishing (difference: 22.7%) and less moderately healthy (difference: 28.4%). The constructs of Role limitations due to physical and emotional problems, General health perception, Vitality, Social functioning, Emotions (mental health) and Disability correlated significantly with emotional well-being. Social well-being correlated significantly with vitality, role limitation due to emotional problems and Emotions (mental health). Psychological well-being correlated significantly with general health perception, vitality, social functioning, role limitation due to emotional problems and emotions (mental health). With multivariate regression analyses we found that the health factors explained 55% of emotional, 27% of social and 21% of the variance in psychological well-being.

Westerhof and Keyes (2010) studied mental illness and mental health across the lifespan. It was found that older adults, except for the oldest old, scored lower on psychopathological symptoms and were less likely to be mentally ill than younger adults. There was a positive relation between age and emotional well-being, a negative relationship between age and psychological well-being, and there was no association between age and social well-being. Although there were fewer age differences for mental health, older adults experienced more emotional, similar social and slightly lower psychological well-being. It was concluded that today’s older adults had fewer mental illness problems, but they were not in a better positive mental
health than today's younger adults. It was also suggested that there were no curvilinear relations between age and complete mental illness.

Redelinghuys (2010) examined general self-efficacy as a moderator between stress and positive mental health in an African context. Results indicated that general self-efficacy moderated relationship between certain aspects of mental health and the experience of manifest symptoms of stress. There was found an inverse correlation between the manifestation of symptoms of stress as measured by the GHQ and positive mental health as measured by the MHC-SF. It was also revealed that somatic symptoms significantly predicted emotional well-being and explained 5% of the variance in EWB. It was established that General self-efficacy significantly moderated the negative influence of the experience of stress as manifest in somatic symptoms and anxiety on emotional well-being of participants. It was also investigated that the negative influence of social dysfunction on psychological well-being was moderated by general self-efficacy and depressive symptoms significantly predicted psychological well-being and explained 6% of the variance in PWB. It was also found that General self-efficacy was found to moderate the relationships between all indices of psychological distress and social well-being in this sample. The moderating role of general self-efficacy was evident in its interaction with all the indices of the experience of stress, namely somatic symptoms, depressive symptoms, anxiety and insomnia, and social dysfunction.

Younes (2011) conducted a study on positive mental health, subjective vitality and satisfaction with life for French Physical Education Students. The findings of the study indicated a negative relation GHQ-12 and the emotional, social, psychological well-being and total mental health. It was also found that the correlation of the MHC-SF (total) with subjective vitality and satisfaction with life was significantly positive. Through CFA, all the scales were found to be valid for the population.

Younes and Ismail (2011) conducted a study on the validation of factor structure of Mental Health Continuum-Short Form for active old adults. Results through confirmatory factor analysis confirmed three factor structure of MHC-SF. The internal consistency coefficient for total MHC-SF was 0.76. The findings of the study revealed that 67.96% of the individuals were categorized as flourishing, 8.55% were languishing and 23.48% were moderately mentally healthy. It was established that MHC-SF was a reliable and valid tool for assessing mental health in diverse cultures.
Laniers, Westerhof, Bohlmeijer, Klooster and Keyes (2011) examined the factor structure, reliability, convergent validity, and discriminant validity of the Mental Health Continuum- Short Form (MHC-SF), a new self-report questionnaire for positive mental health assessment. Results revealed high internal and moderate test-retest reliability. Internal reliability was high for the total MHC-SF (α=0.89), as well as for the subscales of emotional well-being (α=0.83) and psychological well-being (α=0.83), and adequate for the subscale social well-being (α=0.74). The moderate test-retest reliability suggested that the MHC-SF is both sensitive to change and stable over time. Confirmatory factor analysis (CFA) confirmed the 3-factor structure of MHC-SF in emotional, psychological, and social well-being. These subscales correlated well with corresponding aspects of well-being and functioning, showing convergent validity.

Browning (2012) examined the relationship between gratitude and well-being in graduate level counselors-in-training. Results of the study indicated that Cronbach alpha for total MHC-SF was 0.914 and for the domains i.e. Emotional well-being (0.822), Social well-being (0.784) and Psychological well-being (0.844). The findings of the study revealed that 2.5 % scored as languishing, 63.9 % as flourishing, and 33.6 % as having moderate mental health. Each of the three scales i.e. Emotional well-being, Social well-being and Psychological well-being was found to be significant predictors of MHC-SF overall Well-being. It was found that out of eight aspects of Gratitude Scale, only four “Individual Differences in Grateful Affect”, “Focus on What a Person Has”, “Awe”, and “Behavior” scales were significantly predicted both SWLS and MHC-SF. There was found a significant relationship between the eight diverse aspects of gratitude (Grateful Affect, Appreciation of Other People, Focus on What the Person Has, Awe, Behavior, Present Moment, Life is Short and Positive Social Comparison) and the three domains of well-being (Social, Psychological, and Emotional). The strongest relationships existed between the “Focus on What a Person Has” scale and the “Psychological Well-being” scale.

Keyes and Westerhof (2012) studied the chronological and subjective age differences in flourishing mental health and major depressive episode. Results revealed a small and negative correlation between chronological age and major depressive episode and a smaller positive correlation between chronological age and flourishing mental health. It was also found that the prevalence of flourishing mental
health was lowest in youngest age cohorts. It was also revealed that adults who felt younger were more likely to have flourishing mental health and less likely to have major depressive episode. The discrepancy of ideal from actual age correlated negatively with flourishing mental health and was not associated with major depressive episode. It was also made clear that chronological age and subjective age were comparable independent predictors of flourishing mental health while chronological age was a much strong predictor of major depressive episode than subjective age.

Khumalo, Temane and Wissing (2012) investigated general psychological well-being and the Mental Health Continuum in an African Context in relation to some socio-demographic variables. Findings indicated that socio-demographic variables play a role in determining holistic psychological well-being in a South African Setswana-speaking community. Urban living, employment, education and being married were associated with higher psychological well-being. Rural or urban environmental setting, followed by employment status, accounted for the greatest variance in psychological well-being measures. Age and gender were not significantly associated with well-being. The findings also suggested that the current state of African rural living is detrimental to well-being. It was also found that the unemployed experienced poor well-being.

Stahl (2012) conducted an exploratory study on the relation between time perspective, positive mental health and psychological distress across the adult lifespan. The findings of the study revealed that significant relation was found for age and complete mental health. Young adults experienced more psychological distress, middle-aged adults more positive mental health and old adults less psychological well-being. A significant relation was also found for age and time perspective. Young adults were more often classified as futurists and less often as reminisces, middle-aged adults more often as time expansive (i.e., balanced) and old adults more often as both reminisces and time restrictive but less often as futurists and time expansive. In addition, a significant relation was found for time perspective and positive mental health but not for psychological distress. The time expansive category had the highest and the time restrictive category the lowest scores on positive mental health. It was also found that time perspective was differently related to both continua of complete mental health. No relation was found for the interaction of age and time perspective.
and complete mental health. The results of this study indicated that time perspective and age, separately, were both correlates of positive mental health and age was also a correlate of psychological distress and time perspective.

**Keyes, Eisenberg, Perry, Dube, Kroenke and Dhingra (2012)** conducted a study on the relationship of level of positive mental health with current mental disorders in predicting suicidal behavior and academic impairment in College Students. Results of the study revealed that about half (49.3%) of students were flourishing and did not screen positive for a mental disorder. It was also revealed that among students who did, and those who did not, screen for a mental disorder, suicidal behavior and impaired academic performance were lowest in those with flourishing, higher among those with moderate, and highest in those with languishing mental health. It was also found that positive mental health complemented mental disorder screening in mental health surveillance and prediction of suicidal behavior and impairment of academic performance.

**Lamers, Glas, Westerhof and Bohlmeijer (2012)** evaluated the measurement invariance of the MHC-SF. It was found that MHC-SF was highly reliable and valid instrument to measure positive aspects of mental health and mean and reliabilities of the subscales were consistent over time. The results also indicated differences in the performance of one item (social well-being) for educational level and sex and two items (psychological well-being) for age.

**Wilbert (2012)** studied the relationship between stress and mental health among students at University of Twente. Results of the study indicated that students’ total stress score showed to be marginally significant for the relationship between failing and stress and failing was significantly correlated with GPA which indicated that both variables tend to measure the same construct. The correlation between achieved European Credit Points and the Total Stress Score was non-significant. It was also found that female students perceive more stress than their male fellow students. Regarding mental health, there is no significant difference between men and women in the total mental health score. No significant difference was found between Dutch and non-Dutch students regarding mental health. GPA did correlate significantly with mental health. The correlation between stress and mental health was highly significant in explaining 17.8% of the variance of mental health. It was also revealed that there is
a higher correlation between stress and mental health for male than for female students. The emotional wellbeing dimension of mental health was the most associated with stress. The demographic variables explained 3.8% of the variance of mental health. It was also found that GPA and failing added some explanatory value to the variance of mental health (6.6%). Adding job and way of housing to the model, 9.3% of the variance of mental health was explained. Next, stress was entered which resulted in a model that explained 27.1% of the variance of mental health.

**Lim, Ko, Shin and Cho (2013)** conducted a study regarding prevalence and correlates of complete mental health in the South Korean Adult Population. The results of the study indicated that completely mentally healthy adults reported the highest levels of mental, emotional, and physical health and the highest levels of resilience, goal formation, and intimacy. It was also revealed that 7.9% of South Koreans were completely mentally healthy, and roughly one in five adults met the criteria for languishing, indicating that there is much room for improvement in the positive mental health of South Koreans. The analysis of determinants of mental health indicates that family income, education level, and community type played an important role in explaining variations in positive mental health in South Korea.

**2.5 AN OVERVIEW - REVIEW OF RELATED LITERATURE**

Scrutiny of research literature regarding personal growth initiative, self-efficacy, risk-taking behaviour and mental health revealed that studies have been undertaken to explore the different aspects of these variables. Some of the studies have focused to assess the psychometric properties of instruments used in the present study while others have attempted to examine the relationships of Personal Growth Initiative, Self-Efficacy, Risk-Taking Behaviour and Mental Health with other variables. The review revealed that these variables are essential components that motivate an individual to survive in life, so due recognition should be given to these variables in research.

Thus review of literature on the construct of PGI revealed that a lot of studies were performed across cultures, various age groups, different samples, and different educational levels regarding PGI. These studies showed that PGI is related to different variables like locus of control, instrumentality, family functioning, parental alcoholism, mental health, psychological well-being, self-efficacy, distress, trauma, risk-taking behaviour, gender role orientation, counseling etc. In some studies, PGI
acted as independent variable, in some as dependent variable and in others as a moderating variable. Most of the studies related to PGI were done abroad, but studies in Indian context are limited in number.

After reviewing a plethora of findings, it can be concluded that self-efficacy is related to general self-concept, academic performance, emotional intelligence, self-deprecation, course satisfaction in online learning, anxiety, depression etc. A number of studies had established the psychometric properties of self-efficacy scale. It was revealed from the review that Sherer self-efficacy scale is a reliable and valid measure to tap general self-efficacy beliefs across diverse cultures and different age groups.

The review regarding Risk-Taking Behaviour has made it clear that risk taking behaviour can be better understood in terms of domain specificity. So many studies have been conducted to evaluate the psychometric properties of DOSPERT scale. In some of the researches, it has been found that risk taking behaviour is related to risk perception and expected benefits, personality structure, passive risk taking, social pressure and socialization etc. In most of the studies, it was revealed that there existed gender differences on risk-taking behaviour and males were more prone to risk taking than females.

From the review related to mental health, most of the studies were relating mental health with one or other type of disease such as depression, insomnia, suicidal attempt and many more. It was found that hardly any study has been conducted in India regarding the positive aspect of mental health and mental health continuum. There was found a research gap regarding the positive aspect of mental health in Indian context.

In nutshell, examination of research literature related to all the four variables revealed that different studies were performed regarding PGI, Self-Efficacy, Risk-Taking Behaviour and Mental Health. Though the researches are going on PGI at international level but very few researches were actually been undertaken to study PGI at national level. So a gap has been realized by the investigator regarding PGI in Indian context as the construct is at its infancy stage and there is dearth of empirical studies to throw light on the different aspects of PGI related to SE, RTB and MH. There remained a gap in literature regarding the relationship among these variables. So, the need emerges to conduct present study i.e. the relationship of PGI with SE, RTB and MH among university postgraduates.
CHAPTER-II
REFERENCES


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