and a 4-point Likert scale format. From data analysis the later format showed higher validity and reliability than the former one. Construct validity of the scale is evidenced by the factor analysis which revealed five factors (Internal, Chance, Powerful Others, Fate and Self blame) consistent with the previous theoretical model of HLC. As indicated by eta coefficient the scale and the subscales showed strong discriminating power between subjects. The known group comparison indicated a good criterion validity of the scale and the subscales. The scale showed a considerable reliability as alpha coefficient was 0.73 with test-retest reliability of 0.65. Comparison of different groups of students indicated that the scale could be used with confidence for all age groups, though it was more reliable for the preparatory phase, for private and governmental schools for males and females and for different social strata. Further testing of the developed scale is indicated among Egyptian children in different cultures.

INTRODUCTION

One of the most frequently used measure of health-related beliefs over the past two decades is the Health Locus of Control [HLC] (Wallston & Wallston, 1978; Parcel et al., 1980; Lakin, 1988; Oberle, 1991). The theoretical perspective of the HLC construct is based on Rotter's social learning theory (Rotter, 1966). HLC measures the extent individuals perceive themselves to be in control of their own health (Wallston & Wallston, 1978). Typically, HLC beliefs range from the notion that individuals can significantly affect the direction of their own health to beliefs that one is helpless and his good or bad health is due to uncontrollable factors (luck, fate, chance) or under the control of one more powerful or knowledgeable such as a parent or a physician (Kist-Kline & Lipnickey, 1989). Those who believe their health is attributable to their behaviors are defined as Internals, whereas, Externals feel they have no control over their health (Wallston et al., 1976a).

The belief in internal or external control is thought to be a relatively stable personality characteristic. However, Arakelian (1980) suggested that new social learning experiences may, over time, alter previous experiences and change the locus of control (Wallston et al., 1976b). Accordingly, techniques have been developed to help externals to become more internally focused (Wallston et al., 1976a; Wallston et al., 1976b; Arakelian, 1980; Pender, 1985; Hazzard & Angert, 1986). Internals have demonstrated more positive or adaptive characteristic and health-promoting behavior than have externals, for example learning ability, birth control, smoking cessation, physical exercise, medical check up and compliance with medication regimen (Wallston & Wallston, 1978; Kist-Kline & Lipnickey, 1989; Wallston & Wallston, 1981; Eachus, 1991). These findings are very pertinent to health education and support Wallston & Wallston's argument (1978) that many health education programs could be viewed as internality training programs. They advocated evaluating program effectiveness based on a measure of HLC (Wallston & Wallston, 1978).

Wallston et al. (1976b) originally developed a unidimensional scale to predict specific health behaviors from health beliefs. This scale incorporates a Likert-type format with eleven items; six externally and five internally oriented items (Wallston et al., 1976a). Wallston et al. (1978) revised this scale and published two parallel forms (A&B) of 18 items Multidimensional Health Locus of Control Scales (MHLC). This MHLC splits externality into two distinct dimensions; Powerful Others (P) and Chance control (C). So, each form (A&B) consists of three 6-item Likert subscales (I, P, C) where (I) stands for internal control. While this MHLC is designed for adults, another specific measure has been designed for children. The Children's Health Locus of Control (CHLC) designed by Parcel and Meyer in 1978 consists of 20 yes/no items. Testing of CHLC revealed multidimensionality of the scale with six items for "I", five items scoring "C" and nine items examining "P". Thompson et al. (1987) studied the reliability and validity of the adult MHLC scale when administered to children. The