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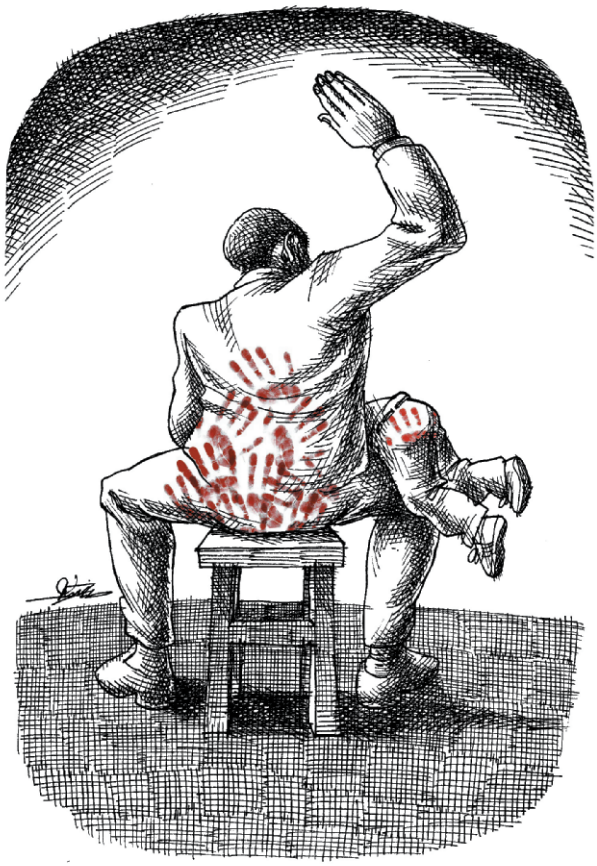
Aspects of Mental Health in Adolescents and Female Prisoners in Present-Day Iran



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Abstract

The general aim of the thesis is to investigate issues of mental health and well-being in modern day Iran, primarily among adolescents in school settings, but also in prisoners who had received the death sentence. The data on Iranian adolescents are compared with similar data, obtained with the same methodology, from adolescents in Finland, for the sake of making cross-cultural comparisons. Sex and cultural differences are explored and analyzed in Studies I, II, and III.

The aim of Study I was investigate sex differences in mental health in 13-15-year-old adolescents in Iran and Finland, in order to explore potential cultural influence on sex differences in mental health during early adolescence. The general finding from studies conducted across nations and cultures appears to be that the adolescent period is more demanding for girls than for boys, with higher scores on mental health problems and lower scores on measures of well-being among girls (Nolen-Hoeksma & Girgus, 1994). Six hundred adolescents from Iran and 2,205 adolescents from Finland (age range 13-15 yrs.) completed a questionnaire consisting of three scales from the Brief Symptom Inventory (Derogatis, 1975), namely anxiety, hostility, and depression); one scale from the Ostrobothnian Youth Survey (Söderberg et al, 2016), body satisfaction and somatic symptoms; the Rosenberg (1965) Self-Esteem Scale; and the SCOFF index for eating disorders (Morgan et al., 1999). The results showed that, against expectations based on studies conducted in the Western cultural sphere, no sex difference was found in the Iranian sample on any of the seven measures. In the Finnish sample, however, sex differences were found on all seven, indicating better mental health among boys than among girls, in this particular age group. The Finnish sample followed the pattern usually found in Western nations, with better mental health among adolescent boys than among adolescent girls. The results suggest that the commonly found sex difference in mental health among adolescents may be a culturally based phenomenon rather than a universal sex difference during adolescence.

The aim of Study II was to investigate social functioning and mental wellbeing in 13-15-year-old adolescents in Iran and Finland, again in order to explore potential cultural and sex-based differences during early adolescence. One thousand and one (1001) adolescents from Iran and 2,205 adolescents from Finland (age range 13-15 years) completed a questionnaire consisting of the following scales: the Mini Direct and Indirect Aggression Scale (Österman, 2010), the Self-Efficacy Questionnaire for Children (Muris, 2001), the School Burnout Inventory (Salmela-Aro et al., 2009), and the Multidimensional Scale for Perceived Social Support Assessment (Zimet et al., 1988). The findings showed that Iranian boys scored highest on aggression, victimization from others' aggression, and school burnout, and lowest on social support, academic self-efficacy, and interpersonal self-efficacy. Finnish boys scored highest on interpersonal self-efficacy and emotional self-efficacy, and lowest on school burnout and victimization. Finnish girls had the highest scores on social support and academic self-efficacy, but the lowest on aggression and emotional self-efficacy. Conclusively, clear differences due to culture and sex were found. It appears that Iranian boys, despite their higher social status than girls, experienced their school environment as more stressful than Iranian girls, and than Finnish boys as well.

The aim of Study III was to investigate whether depressive symptoms could serve as a mediator between the experience of physical punishment (PP) in childhood and victimization from peer aggression at school, as previously has been shown by Söderberg et al. (2016). An aggregated sample consisting of 1,001 Iranian adolescents and 2,205 Finnish adolescents, all 13-15 years of age, participated in the study. The sample was the same as in previous studies in the current thesis. Data were analyzed with conditional process modeling (Preacher & Hayes, 2008). Sex (female vs. male) and country (Iran vs. Finland) served as potential moderators in the analysis. PP was measured with the Brief Physical Punishment Scale (BPPS) by Österman and Björkqvist (2007), depression was measured with a subscale from the Brief Symptom Inventory (BSI) by Derogatis (1975),

and aggression and victimization at school with the Mini Direct & Indirect Aggression Scale by Österman and Björkqvist (2008). The hypothesis was only partly corroborated. Depressive symptoms had a weak mediating effect. The results are thus somewhat different from those by Söderberg et al. (2016), based on a Finnish sample only. In particular, the Iranian boys stood out: in their case, there was absolutely no mediating effect of depressive symptoms at all. This finding indicates that more study is needed to investigate under which circumstances depression is mediating the link of revictimization under study.

The aim of Study IV was to investigate the mental well-being of 35 women prisoners who all had received the capital punishment, in the Gorgan jail, northeastern Iran. Most of them had received their sentence for killing their husband. A control sample of 35 women of the same age from Gorgan was included in the study design. The respondents filled in a paper-and-pencil questionnaire, including the following scales: (1) aggression was measured with the Mini Direct and Indirect Aggression Inventory (Mini-DIA; Österman & Björkqvist, 2010); (2) victimization from others' aggression was measured with the victim version of the Mini-DIA (ibid.); (3) emotional self-efficacy was measured with the emotionality subscale of the Self efficacy Questionnaire (SEQ; Muris, 2001); (4) social support was measured with the Multidimensional Scale of Perceived Social Support Assessment (Zimet et al., 1988). Three subscales from the Brief Symptom Inventory (Derogatis, 1975) were also included in the test battery: (5) depression, (6) hostility, and (7) anxiety. Some single items regarding family history and suicidal thoughts were also included. The results showed that the imprisoned women scored higher than the controls on aggression, anxiety, and hostility; the controls scored higher than the imprisoned women on social support and emotional self-efficacy. The imprisoned women had, to a greater extent than the controls, a family history with addiction problems and suicidality. The findings corroborate previous findings about the mental status among prisoners with a death sentence (cf. the review

by Cunningham and Vigen, 2002. The study is unique because it is, to our knowledge, the first study in the world to focus solely on imprisoned women with a death sentence.

Key words: adolescents, mental health, mental well-being, aggression, victimization, depression, anxiety, self-efficacy, school burnout, physical punishment, prisoners, Iran, Finland

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Vasa, September 26, 2018

Jalal Khademi

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List of Original Publications

Study I Khademi, J., Björkqvist, K., Söderberg, P., & Österman, K. (2015). Sex differences in mental health among 13-15 year old adolescents in Iran and Finland: A comparative study. *Journal of Child & Adolescent Behavior*, 3:2. doi:10.4172/2375-4494.1000216

Study II Khademi, J., Söderberg, P., Österman, K., & Björkqvist, K. (2017). Social functioning and mental wellbeing in 13-to 15-year-old adolescents in Iran and Finland: A cross-cultural comparison. *Journal of Child & Adolescent Behavior*, 5:333. doi:10.4172/2375-4494.100033

Study III Khademi, J., Björkqvist, K., & Österman, K. (2018). The relationship between physical punishment at home and victimization from peer aggression at school in adolescents in Iran and Finland: A mediator–moderator analysis. *European Journal of Social Science, Education and Research, 12* (1), 8–14. doi:10.26417/ejser.v12i1.p8-14

Study IV Khademi, J., Björkqvist, K., & Österman, K. (2017). A study of mental wellbeing of imprisoned women in Iran. *European Journal of Social Sciences, Education and Research, 11* (2), 10–14. doi:10.26417/ejser.v11i2.p10-14

Author Contribution

Jalal Khademi is the first author of all four studies included in this thesis. He is responsible for the full data collection in Iran, and for the main part of the text. Patrik Söderberg is responsible for the data collection in Finland. The statistical analyses have been performed jointly by the research group.

1. Introduction

1.1 Aim of the Study

The general aim of this study was to investigate issues of mental health and well-being in modern day Iran, primarily among adolescents in school settings, but also in prisoners who had received the death sentence. The data on Iranian adolescents are compared with similar data, obtained with the same methodology, from adolescents in Finland, for the sake of making cross-cultural comparisons. Sex and cultural differences are explored and analyzed in Studies I, II, and III.

Study I investigates sex differences in mental health among adolescents in Iran and Finland. Aspects such as anxiety, depression, hostility, somatic symptoms, self-esteem, and body satisfaction are focused upon. Study II, in turn, focuses on aspects of school adjustment and behavior towards peers in school settings: aggressive behavior and victimization from others' aggression, self-efficacy (of three kinds), school burnout, and perceived social support. Study III investigates whether depressive symptoms serve as a mediator between the experience of physical punishment in childhood and victimization from peer aggression at school. And finally, Study IV focuses on a sample of women who had received the death sentence, and investigated their levels of aggression, victimization from others' aggression, hostility, depression, anxiety, social support, and emotional self-efficacy. Their scores are compared with a control group of women without a prison history.

1.2 Mental Well-being – Mental Health

Recently there has been a significant increase in studies on mental well-being and mental health (Deci & Ryan, 2000; Diener, Lucas, & Scollon, 2006; Keyes, 2005, 2007; Lyubomirsky, Sheldon, & Schkade, 2005; Ryff & Singer, 1998, 2008; Seligman, 2002, 2008). According to the definition by the World Health Organization (2014), mental health

is a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. The concept of health is usually considered to have three different dimensions, i.e. physical, mental (or psychological), and social. Mental health is thus one of three key aspects of health. In 1987, a fourth health dimension of spiritual wellbeing was suggested (Mahler, 1987).

Mental well-being is a concept closely related to, if not synonymous with, mental health. Well-being may be seen as the absence of mental illness. In that sense, mental well-being is the positive end of the spectrum or dimension of mental health. Beiser, Feldman, and Egelhoff (1972) opined that the state of well-being is probably the reflection of a complex interaction between various psychological factors. They suggested that the absence of negative affect, a positive sense of involvement, and long-term satisfaction all are important for the state of well-being.

People's health is one of the most important issues in every country, and today, healthiness is highly valued in Western countries, especially among young people. However, this view is mostly limited to physical health, while mental health has received less attention (Irwine, Burg, & Cart, 2002; Moon, Meyer, & Grau, 1999). From the 1960s and 1970s onwards, mental wellbeing has become increasingly prominent as a subject for serious investigation (Beiser, Feldman, & Egelhoff, 1972; Berkman, 1971; Bradburn & Caplovitz, 1965; Bradburn, 1969; Brenner, 1970; Gaitz & Scott, 1972; Gurin, Veroff, & Feld, 1960; Maitlin, 1966; Phillips, 1967; Veroff, Feld, & Gurin 1962).

The functional model of mental health describes it as a foundation for the experience of mental well-being and effective functioning in an individual (Lehtinen & Joukamaa, 1999). Mental health is furthered viewed as part of a process, where positive function and social interaction in various social contexts are emphasized for their important impact on mental health in all ages. According to the functional model, good mental health and mental well-being are

defined as a balanced interaction between the individuals and their environment. The model also stresses that mental health is influenced by numerous factors at both the individual and the societal level (Forsman, Nyqvist, Schierenbeck, Gustafson, & Wahlbeck, 2012).

1.3 Depression

Depression can be defined as a state of mood, as a symptom prevalent in many different mental disorders, as a syndrome measured by depression rating scales, or as a clinical diagnosis described in diagnostic classifications (Lehtinen & Joukamaa, 1994). Depression is among one of the most disabling disorders, and frequently begins early in life (Fergusson & Woodward, 2002; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993).

There is a strong relationship between depression and increased risk of suicide, school refusal, and substance abuse in adolescents (Culp, Clyman, & Culp, 1995). Studies that used self-report questionnaires have consistently shown girls to report significantly higher levels of depressive symptoms than boys. We must distinguish between a depressive disorder and a normal reaction to disappointments and difficulties in life (American Psychiatric Association, 2000). Most of the time, a depressive disorder is accompanied by a significant impairment of psychological, social, and physiological functioning.

The DSM-5 (American Psychiatric Association, 2013) diagnoses minor depressive episodes according to the following criteria:

Two to four of the following symptoms have been present during the same two-week period:

1. Significant appetite or weight change.
2. Insomnia or hypersomnia nearly every day.
3. Psychomotor agitation or retardation (observable by others).
4. Anergia – fatigue nearly every day.

5. Thoughts of worthlessness or inappropriate guilt nearly every day.
6. Impaired concentration or memory nearly every day.
7. Recurrent thoughts of death or suicide, or suicide attempt.

Depression has been consistently found to increase during adolescence, with an acceleration around age 14, particularly in girls (Hankin, Abramson, Moffitt, Silva, McGee, & Angell, 1998; Petersen, Sarigiani, & Kennedy, 1991; Twenge & Nolen-Hoeksema, 2002). A study conducted by Vardanyan (2013) stated that, in 2012, 350 million adolescents between 14-17 years worldwide suffered an episode of depression. Prevalence rates were higher in young girls as compared to boys. The World Mental Health survey executed in 17 countries reported that, on average, about 1 in 20 adolescents suffers from depression (Marcus, Brooks, Ward, Draper, Gozal, Halbower, Jones, Lehmann, Schechter, Sheldon, Shiffman,& Spruyt, 2012). Moreover, Greydanus, Patel, and Pratt (2010) state that globally, 200,000 adolescents and young adults commit suicide due to depression, and the risk of suicide is increasing devastatingly. Depression in young adults occurs because of the dynamic interaction of a wide range of risk factors. Adoption and family studies have established that depression runs in families, and that the reason is genetic rather than due to environmental influences (Sullivan, Neale, & Kendler , 2000). A family study of recurrent, early-onset depression found that over one third of first-degree relatives and one fifth of extended relatives had a history of depression (Zubenko, Zubenko, Spiker, Giles, & Kaplan, 2001). Physical and emotional abuse in childhood can be a strong factor for the appearance of depression in adolescence (Brown, Cohen, Johnson, & Smailes, 1999; Silberg, Rutter, & Eaves, 2001; Turner & Muller, 2004). In addition, there is a clear association between depression and the use of drugs and alcohol (Brook, Brook, Zhang, Cohen, & Whiteman, 2002; Fergusson, & Woodward, 2002; Hanna, Yi, Dufour, & Whitmore, 2001; Peirce, Frone, Russell, Cooper, & Mudar, 2000;).

1.4 Anxiety

Anxiety is the anticipation of future threat. Obviously, there is overlap between fear and anxiety, but they also differ, with fear more often being associated with surges of autonomic arousal necessary for fight or flight, thoughts of immediate danger, and escape behavior, and anxiety more often associated with muscle tension and vigilance in preparation for future danger and cautiousness or avoidant behaviors (American Psychiatric Association, 2013). Because of puberty, the risk of anxiety disorder in adolescence can be higher than during other life periods (Schneier, Johnson, Hornig, Liebowitz, & Weissman,1999; Wittchen, Stein, & Kessler, 1999). Anxiety can be a strong predictor for under-achievement in school, having fewer social networks and close friends, and poorer social skills (Kashdan, Herbert, 2001). Anxiety is more common in adolescent girls than boys (Essau, Conradt, & Petermann, 2000; La Greca, & Lopez, 1998; Lewinsohn, Gotlib, Lewinsohn, Seeley, & Allen, 1998; Reinherz, Giaconia, Lefkowitz, Pakiz, Frost, 1993).

DSM-5 (American Psychiatric Association, 2013) mentions the diagnostic criteria for a generalized anxiety disorder as follows:

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

B. The individual finds it difficult to control the worry.

C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months (note: only one item is required in children):
   1. Restlessness, feeling keyed up or on edge.
   2. Being easily fatigued.
   3. Difficulty concentrating or mind going blank.
   4. Irritability.
   5. Muscle tension.
   6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).

D. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).

F. The disturbance is not better explained by another medical disorder.

1.5 Physical Punishment

The association between physical punishment (in the literature also referred to as corporal punishment) and mental health is a central topic within developmental psychology. The physical punishment (PP) of children was previously considered as an accepted and appropriate method of evoking behavioral compliance (Straus, 1983). Today this is not so, and PP in the home is prohibited by law in 53 countries (Global Initiative to End All Corporal Punishment of Children, 2018). There is now evidence that PP is associated with a large number of negative outcomes, such as increased aggressiveness (Gershoff, 2002; Jaghoory, Björkqvist, & Österman, 2013; Straus, 1991), depression (Österman, Björkqvist, & Wahlbeck, 2014; Turner & Muller, 2004), low self-esteem (Turner & Finkelhor, 1996), phobias and anxiety (Afifi, Mota, Dasiewicz, MacMillan, & Sareen, 2012), schizotypal personality (Afifi et al., 2012; Österman et al., 2014), alcohol abuse (Afifi et al., 2012; Österman et al., 2014), drug abuse (Afifi et al., 2012), intimate partner violence (Jennings, Okeem, Piquero, Sellers, Theobald, & Farrington, 2017; Richards, Tomsich, & Jennings, 2016). social maladjustment (Morris, Halliburton, Morris, Robinson, Myers, Aucoin, Keyes, & Terranova, 2013) and suicidality (Österman et al., 2014). PP has also been found to slower cognitive development and adversely affect academic achievement (Straus & Paschall, 2009). Dussich and Maekoya (2007) found that exposure to

physical punishment in the home was a predictor of involvement in bullying behavior at school, both as perpetrators and victims.

PP is defined as the intentional infliction of physical pain for the purpose of deterring unwanted behavior (Litzow & Silverstein, 2008). Some generations ago, disciplining a child for a transgression by for instance spanking was generally accepted worldwide, and considered an appropriate method of eliciting behavioral compliance. It was considered conceptually distinct from physical abuse (Straus, 1983) However, the acceptance of PP in child upbringing is today highly related to cultural values. Research from the US has shown that at the turn of the century, over 94% of American parents of toddlers used some form of corporal punishment (Straus & Stewart, 1999), and that 75% of a college student sample reported experiencing some form of PP in their childhood (Ateah & Parker, 2002). Affifi (2006) found, in an examination of nationally representative US data, that 48% of adults retrospectively reported a history of physical punishment (having something thrown at them or being pushed, grabbed, shoved, slapped, or spanked) without having experienced more severe physical or sexual abuse.

In Scandinavian countries, the situation is strikingly different. In Sweden, physical punishment by parents in the homes was forbidden by law in 1979, and in Finland in 1983. Today, a total of 53 nations in the world have similar laws (Global Initiative to End All Corporal Punishment of Children, 2018). In Finland, more than two thirds of adolescents have never experienced physical punishment (Österman, Björkqvist, & Wahlbeck, 2014). Österman et al. (ibid.) found a significant drop in reports of being slapped and beaten with an object among respondents who were born after the law was adopted, and the figure keeps decreasing. The decline in physical punishment was associated with a similar decline in the number of murdered children in the country.

As a consequence of the law against physical punishment of children, there is in Finland and Sweden no conceptual difference

between physical punishment and physical abuse, since all forms of physical punishment are considered abusive.

Iran is one of the new countries that banned PP in schools, and regarding legislation, students and their parent can report and complain about its occurence. However, despite being banned, it does take place, and some people believe that PP is a necessary part of education (Chavis, Hudnut-Beumler, Webb, Neely, Bickman, Dietrich, & Scholer, 2013).

1.5.1 Physical Punishment and Mental Health

Over the last decades, there has been a shift in perspective concerning the physical punishment of children also in the USA, due to the results of an increasing number of studies showing that PP in childhood is associated with serious mental health and other issues later in life. In 1990, research showing an association between physical punishment and negative developmental outcomes was starting to accumulate (Durrant & Ensom, 2012). The use of physical punishment is a risk factor for antisocial behavior, depression, and anxiety (Durrant, 2008; Durrant & Ensom, ibid; Gershoff, 2002; Lansford, Chang, Dodge, Malone, Oburu, & Palmerus, 2005; MacMillan, Boyle, Wong, Duku, Fleming, & Walsh, 1999; Slade & Wissow, 2004; Straus, Sugarman, & Giles-Sims, 1997). Rozenblat, Ryan, Wertheim, King, Olsson,& Krug, 2017), found a significant relationship between the experience of PP and problems of emotional control. Österman et al. (2014) found that respondents who had been exposed to higher amounts of physical punishment during childhood than average scored significantly higher on alcohol abuse, depression, mental health problems, and schizotypal personality as adults. Divorced adult respondents had been significantly more physically punished than others. Respondents who had attempted suicide during the last 12 months had been exposed to PP during childhood significantly more often than those who had not attempted suicide. Afifi, Mota, Sareen, & MacMillan (2017) found that physical punishment increased the odds of experiencing intimate partner violence (IPV) in adulthood.

Physical punishment is also associated with adult Axis I and II mental disorders. PP may lead to child maltreatment, and result in a form of toxic stress that has lifelong implications for adverse mental and physical problems (Shonkoff & Garner, 2012). There is an increasing amount of evidence showing that children who are physically punished are at increased risk of more severe child abuse; that is, PP may escalate into worse abuse (Gershoff, 2002).

Some research has found that there is a link between physical punishment and slower cognitive development, which affects academic achievement adversely (Straus & Paschall, 2009). The results of neuroimaging studies suggest that physical punishment may reduce the volume of the brain's grey matter in areas associated with performance on the Wechsler Adult Intelligence Scale (WAIS-III) (Tomoda, Suzuki, Rabi, Sheu, Polcari, &Teicher, 2009). Physical punishment can cause alterations in the dopaminergic regions associated with vulnerability to the abuse of drugs and alcohol (Sheu, Polcari, Anderson, & Teicher, 2010). A study by Taylor, Manganello, Lee, and Rice (2010) found that frequent spanking when a child was 3 was linked to higher levels of child aggression when the child was 5. In addition, the results of some studies showed that physical punishment by the mother was related to a decrease in cognitive ability in comparison with other children. PP had the largest effect on children at the ages 5 to 9 (Straus & Paschall, 2009).

1.6 Aggression

1.6.1 General Aspects of Aggression

Human aggression is any behavior directed toward another individual that is carried out with the proximate (immediate) intent to cause harm. In addition, the perpetrator must believe that the behavior will harm the target and that the target is motivated to avoid the behavior (Baron & Richardson 1994; Berkowitz 1993; Bushman & Anderson 2002). Loeber and Hay (1997) include the threat of harm into the definition. They point out that aggression is not a unitary

term, but it encompasses a variety of behaviors, including verbal aggression, bullying, physical fighting, robbery, rape, and homicide. Health Canada (2004) includes in their definition any demanding or intrusive behavior that has an adverse effect on others (e.g., name-calling, taunting, or verbal threats). Aggressive behavior can be direct (e.g. hitting, yelling, destroying personal property, insulting), or indirect (malicious gossiping, social exclusion, spreading of false rumors) (Björkqvist, Lagerspetz, & Kaukiainen, 1992)

Violence is a subdomain of aggression in which the aim is to cause physical injury, or even death, to the victim. Aggression includes all types of violence, but most types of aggression are not violent. The use of physical force is a characteristic distinguishing between violence and other types of aggressive behavior. However, in the literature, the demarcation line between violence and other forms of aggression is often blurred.

Most authors agree on that aggression is a behavior; it is not an emotion, a motive, an attitude, or a diagnosis. Rather, aggression is a behavioral response to an internal state. It is strongly suspected that aggression is due to both genetic (biological) factors and social (learned) factors. Human biology operates in a social context: the environment influences the development of nerve connections just as biological processes affect response to the environment (Mayer, 1997).

Accidental harm is not aggression. The harm that takes place as an incidental byproduct of helpful actions is also not aggressive, because the harm-doer believes that the target is not motivated to avoid the action (e.g., pain experienced during a dental procedure). Similarly, the pain administered in sexual masochism is not aggressive, because the victim is not motivated to avoid it. In this case, the pain is actively solicited in service of a 'higher' goal (Baumeister, 1989).

It is common to distinguish between proactive and reactive aggression (Dodge & Coie, 1987). Reactive aggression occurs in retaliation against some real or imagined provocation or threat, and arises from feelings of anger or frustration. Proactive aggression, on the other hand, does not require anger or provocation, but is an

attempt to gain access to resources (which, for younger children, might be toys) or to secure or cement the aggressors' social dominance.

A consistent finding is that overt aggressive behavior begins early in life and, in most children, reaches a peak at about four years of age, declining after that. Campbell, Shaw and Gilliom (2000) point out that it is often not until the school entry age that aggressive behavior patterns become apparent. Until then, the behavior is explained away as being a function of factors such as age, for example, 'the terrible twos'; gender, e.g., 'boys will be boys' or a phase, for example, 'she'll grow out of it'. These reassurances are contradicted by mounting evidence suggesting that a substantial proportion of aggressive, defiant, overactive toddlers and pre-schoolers continue to have problems at school entry age (Campbell, Pierce, Moore, Marakowitz, & Newby, 1996; Shaw, Winslow, & Flanagan, 1999).

Results of several studies show that almost one-third of aggressive five-year-olds were still more aggressive than their peers at age 14 (Bor, Najman, O'Callaghan, Williams & Anstey, 2001; Richman, Stevenson & Graham, 1982; Shaw, Gilliom & Giovanelli, 2000). Another study showed that when aggressive behaviours are present in preschool-aged children, approximately 50% of them are aggressive also during adolescence (Campbell 1995). A substantial number of preschoolers who engage in aggression will engage in antisocial behaviour later in life (Bor, Najman, O'Callaghan, Williams & Anstey, 2001).

Results from a study of 5000 pregnant mothers and their children showed that compared with sex, poverty, family structure, and maternal education, aggression at the age of five was a stronger predictor of adolescent delinquency than the other factors. One in five aggressive two-year-olds are likely to become aggressive adolescents, and one in ten may become delinquent. Data from six long-term studies from Canada, New Zealand, and the United States have shown that chronic physical aggression during elementary school years can be the best behavioral predictor of violent behavior during

adolescence (Broidy, Nagin, & Tremblay,1999; Nagin & Tremblay, 1999). Still, the majority of aggressive preschoolers do not become aggressive adolescents. Studies show that early high levels of conduct problems may desist by adolescence, and only a small percentage identified as being at risk during early childhood go on to having major problems later in life (Bennett, Lipman, Racine, & Offord, 1998; Fergusson, Lunskey, & Horwood 1996; Moffitt, Caspi, Kickson, Silva, & Stanton 1996).

1.6.2 Genetic Factors of Aggression

The influence of genetic factors on behavior and development has been increasingly emphasized in recent years, and there is a growing body of evidence on the importance of different types of gene-environment correlations and gene-environment interactions. According to some authors, we cannot separate nature and nurture in the way that was once envisaged (Bronfenbrenner & Ceci, 1994; Rutter, 1997; Rutter, Dunn, Plomin, Simonoff, Pickles, Maughan, Ormel, Meyer, & Eaves, 1997).

A meta-analysis by Miles and Carey (1997) was performed on data from 24 studies investigating genetic factors and aggression, using various measures of aggression. There was a strong overall genetic effect that may account for up to 50% of the variance in aggression. Self-report and parental ratings showed that both genes and the family environment are important in youth; the influence of genes increased but that of family environment decreased at later ages. (Plomin & Rutter, 1998; Rutter & Plomin, 1997).

1.6.3 The Development of Aggressive Behaviour in Children and Young People

In a study spanning 22 years (Huesmann, Eron, Lefkowitz, & Walder, 1984), data were collected on the aggressiveness of over 600 participants, their parents, and their children. Subjects who were more aggressive than others at the age of 8, at the beginning of the study,

were also more aggressive at the age of 30 at the end of the study. The stability of aggressive behavior was shown to be very similar to the stability of intellectual competence, especially for males. Early aggressiveness was predictive of later serious antisocial behavior, including criminal behavior, spouse abuse, traffic violations, and self-reported physical aggression. Furthermore, the stability of aggression across generations within a family, when measured at comparable ages, was even higher than the within-individual stability across ages. The authors concluded that, whatever its causes, aggression can be viewed as a persistent trait that may be influenced by situational variables but possesses substantial cross-situational constancy.

Most, but not all, serious aggression during adolescence and adulthood is committed by youths who have been persistently aggressive since childhood (Loeber & Hay, 1997) - a group who have been identified as having a life-course-persistent or early-onset variety of aggressive behavior. Another pattern has been described as an adolescent-onset or adolescence-limited variety. As the label suggests, some youths who have previously not been an aggressive start to exhibit such behavior at adolescence. The life-course-persistent and adolescence-limited groups are distinguished from each other by the severity of their behaviors and the risk factors associated with them. While it is likely that there are more than just two varieties of aggression-prone youths (Loeber & Hay, 1997; Nagin, Farrington, & Moffitt, 1995), this distinction has proved useful in tracing developmental antecedents of aggressive and antisocial patterns of behavior.

1.6.4 Family Factors in Aggression

Physical aggression runs in families (Baillargeon, Tremblay, & Willms, 2002). A history of familial criminality can predict physical aggression of boys at two years of age (Keenan & Shaw, 1995). Youths who show high levels of antisocial behavior have, more commonly than other youths, a biological parent who engages in chronic antisocial behavior

(Farrington, 1995; Lahey, Hartdagen, Frick, McBurnett, Conner & Hynd, 1988).

Farrington, Barnes, and Lambert (1996) followed up 411 males from 397 London families, from eight to 40 years of age, and found that half of the criminal convictions recorded in the sample were accounted for by only 6% of the families. Fifty-three percent of males with a convicted family member were themselves convicted, compared with only 24% of those without a convicted family member. Tremblay, Boulerice, Harden, McDuff, Perusse, Pihl, & Zoccolillo (1996) found that family effects explained 38% of the total variance in physically aggressive behavior after controlling for age, sex, socioeconomic status, and family structure. Siblings are more similar to each other than to children of other families. The odds of a second child being highly physically aggressive if the first child is aggressive have been found to be three or four times higher than if the first child was non-aggressive (Baillargeon, Tremblay & Willms, 2002).

1.7 Bullying

Bullying is a form of peer aggression that often occurs in schools (Smith & Shu, 2000) and it is commonly defined as negative actions that have hostile intent, are repeated over time, and involve a power differential between the bully and the victim (Olweus, 2003). It has been suggested that there are three types of bullying, physical, verbal, and indirect (Björkqvist, Lagerspetz, & Kaukiainen, 1992). Physical, verbal, social exclusion, emotional, and sexual bullying are different categories mentioned by Elliot (1999). Piskin and Ayas (2011) classified bullying for primary school children into five categories: physical, verbal, isolation, rumor spreading, and harming properties; however, Piskin and Ayas (2007) added sexual bullying as a sixth category for adolescents attending middle school and high school (see also Cheraghi & Piskin, 2011).

Bullying is distinguished from general aggression by its repeated and targeted nature. It can be reactive to a real or imagined injustice, supposedly inflicted by the target of the bullying, for instance in

revenge for aggression, for gossiping, or for poaching of same or opposite sex friends. However, most bullying is proactive, whereby perpetrators target others who are generally younger or weaker than themselves in gratuitous, unjustified, deliberate and repeated attempts to oppress, dominate, and inflict hurt (Khezri, Ghavam, Mofidi, & Delavar 2013). Girls who bully are more likely to engage in non-physical harassment than boys, and girls have also been reported to be increasingly involved in harassment via the internet (Health Canada, 2004).

1.8 Victimization

Victimization is the process of being victimized, becoming a victim. The targets of aggression, bullying, or physical punishment are referred to as victims. The study of the process, rates, incidence, effects, and prevalence of victimization is usually referred to as victimology.

Victimization may be measured according to type (Schreck, Miller, & Gibson, 2003), magnitude, or frequency (Glew, Fan, Katon, & Rivara, 2008; Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt 2001).

Studies have found a relationship between victimized once and being victimized again (revictimization); victimization is also associated with mental wellbeing, mental health, aggression, anxiety, and sleeping problems (Craig, 1997; Cohen & Kendall, 2014; Finkelhor, Ormrod, & Turner,2007; Gagné, Lavoie, & Hébert, 2005; Greene, Nurius, Hooven, & Thompson, 2015; Geel, Goemans, & Vedder, 2016; Hawker & Boulton, 2000; Moon, & Jang, 2014).

The term victimization is used when someone has been abused or victimized at one point in life (McIntyre & Widom, 2011); however, if the victimization occurs again, it would be referred to as revictimization. In clinical work with adults who have been severely abused as children, mental health professionals have repeatedly observed revictimizations such as physical or sexual assault, some of which seem to mirror the traumatic childhood experience (Chu, 1992).

In research on aggression, victimization plays a complementary role: if there is aggression, there is also a victim. Studies show that there is a significant relation between aggression and victimization. For example, Ostrov (2010) found that children with a history of victimization show more aggression in class; Khademi, Björkqvist, and Österman (2017; Study IV in this thesis), showed that imprisoned women had experienced a high level of victimization in their life. In addition, Greene, Nurius, Hooven, and Thompson (2015) found that there is a strong relation between aggression, victimization, and abuse.

Therefore, victimization has a dual role; on one hand, it is the painful exposure to the aggression of others, and on the other, it is a high-risk factor to evoke aggression in oneself (Arseneault, Bowes, & Shakoor, 2010; Björkqvist & Österman, 2014; Finkelhor & Ormrod, 2007; Litrownik, Newton, Hunter, English, & Everson 2003; Shahinfar, Fox, Leavitt, 2000; Shields & Cicchetti, 2001; Sourander, Helstelä, Helenius, & Piha, 2000).

1.9 Self-Efficacy

Many researchers are of the opinion that self-concept, self-efficacy, and self-esteem are exchangeableterms (Stern, Lynch, Oates, O'Toole, & Cooney, 1995). However, others disagree. According to Burnett (1994), self-concept may be defined as a cognitive (thought) orientation that includes both descriptive and evaluative beliefs about one's properties, whereas an individual's self-esteem is about a person's individual feeling about him or herself (Burnett, 1994). The concept of self–esteem describes the affective or evaluative assessment of one's own self; it often serves as a mediator in psychological health issues (Neiss, Sedikides, & Stevenson, 2002).

Self-efficacy is often categorized into different areas. While general self–efficacy describes the ability to stand out peer pressure, social self-efficacy is the ability to form and save relationships, be assertive, and to engage in free time activities; on the other hand, academic self-efficacy is the ability to perform school work at home and in class,

regulate personal learning activities, and to meet academic expectations (Jabbarifar, 2011). Bandura (1986) mentioned four resources for developing self-efficacy: mastery of experiences, vicarious experiences, persuasions, and physiological states. He described mastery of an experience as the interpreted result of purposive performance. He also suggested that people who believe in their abilities have more success in achieving their goals.

1.10 Social Support

Like many psychological terms, social support is a concept which is difficult to find a definition that everyone agrees upon, and this diversity of opinions has been widely commented on in the literature (Kawachi & Berkman, 2001; Turner, Frankel, & Levin, 1983). Turner and Brown (2010) write that the Oxford Dictionary provides several explanations about the meaning of the concept of support, such as to keep someone from failing or giving way; to give courage, confidence, or power of endurance to someone; to supply with necessities; and to lend assistance or countenance to someone, but none specifically about social support. The fact that social support always include human relationships is the only factor distinguishing it from support in general (Turner & Brown, 2010).

According to Bowlby's (1980) attachment theory, social support means having people whom we can trust in, and who let us know that they care about, value, and love us (Sarason, Levine, Basham, & Sarason, 1983).

Cohen and Wills (1985) described social support as a protection of an individual who is going through a stressful event, and the individual understands that others can help him/her with the provision of necessary resources. Social support has also been described as a protective factor against the effects of stress (Cobb, 1976). To improve positive corresponding, personal maturity, and buffering against negative consequences of stress are the goals of social support (Sarason et al., 1983).

Social support is closely related to concepts such as “social bonds” (Henderson, 1977), “social networks” (Wellman & Wortley, 1989), “meaningful social contact” (Cassel, 1976), “availability of confidants” (Brown, Bhrolchain, & Harris, 1975), and “human companionship” (Lynch, 1977). Although these are not identical concepts, they are similar and share a focus on the relevance and significance of human relationships.

1.11 Body Satisfaction

The image of our body which we make in our mind is called our body image. Body image is how our body is depicted to ourselves (Schilder, 1950). The way that people see their body (their height, weight, face, hair, skin color, etc.) and their feelings about these factors form their body image. In order to clarify the definition, Schilder (ibid.) writes that body image is not just a conceptual construct, but it also is a reflection of others’ attitudes. The high prevalence of body dissatisfaction during adolescence, a critical period of identity formation, is disturbing in the sense that body image, self-image, and self-esteem tend to be closely intertwined (Keery, van den Berg, Thompson, 2004). Longitudinal analyses show that low body satisfaction during early and middle adolescence is predictive of later signs of more global mental distress, including low self-esteem and depressive symptoms (Holsen, Kraft, & Roysamb, 2001; Johnson & Wardle, 2005; Stice & Bearman, 2001).

2. Methods

2.1 Samples

Studies I to III had the same two samples: 1,001 adolescents from Iran and 2,205 adolescents from Finland (age range 13-15 years) participated in the research. The Iranian sample consisted of middle school pupils from Gorgan, a city with about 300,000 people, located in northern Iran. In Study I, only 600 adolescents of the total Iranian sample participated due to the inclusion of certain questions in the survey. The mean age of the girls was 13.6 years (*SD* = 0.38), and the mean age of the boys was 13.6 years (*SD* = 0.41). There was no age difference between them.

The sampling procedure was as follows. A letter was sent to school authorities of the city of Gorgan in northeastern Iran. They decided which schools in the city were allowed to participate in the study. Six schools for girls and five for boys were given permission to participate. In that sense, we cannot be absolutely sure about the representativeness of sample, but it can be assumed that it was relatively representative.

The Finnish sample, which was used as a comparison group, were participants in the Ostrobothnian Youth Survey (OYS) (Söderberg, Björkqvist, & Österman, 2016). It consisted of all the 7th and 9th graders in the Ostrobothnian region in Finland. The mean age of the girls was 15.0 years (*SD* = 0.65), and the mean age of the boys was 15.0 years (*SD* = 0.70). There was no age difference between them. There was, however, a slight age difference between the Iranian and the Finnish samples, and age was therefore kept as a covariate in the analyses.

Study IV investigated the mental health and well-being of 35 women prisoners (mean age = 28.7 years, *SD* = 7.6) in the Gorgan jail, northeastern Iran, who all had received the capital punishment. Most of them had received their sentence for killing their husband. A

control sample of 35 women of the same age from Gorgan was included.

2.2 Instruments

The data were in all studies collected with paper-and pencil questionnaires. The questionnaire consisted of demographic data and a number of scales. The data for Studies I – III were all collected at the same time, with the same questionnaire. Different scales were analyzed in different studies. The included scales were the following ones: three subscales from the Brief Symptom Inventory (anxiety, hostility, and depression) (Derogatis, 1975); the Brief Physical Punishment Scale (Österman & Björkqvist, 2007); the Mini Direct & Indirect Aggression Scale (Österman & Björkqvist, 2010); body satisfaction and somatic symptoms (a scale constructed for the present study); the Rosenberg (1965) Self-Esteem Scale; the SCOFF index for eating disorders (Morgan, Reid, & Lacey, 1999); the Self-Efficacy Scale for Children (Muris, 2001); and the Multidimensional Scale of Perceived Social Support Assesment (Zimet, Dahlem, Zimet, & Farley, 1988).

In Study IV, the study investigating mental health and well-being in imprisoned women. Some of the aforementioned scales were used, namely the victim part of the Mini Direct & Indirect Aggression Scale, the subscale of emotional self-efficacy from the Self-Efficacy Scale for Children, the Multidimensional Scale of Perceived Social Support Assesment, and three subscales from the Brief Symptom Inventory (anxiety, hostility, and depression).

2.3 Procedure

The data for studies I – III were collected as follows:

The first step was to find school psychologists that were willing to aid in the collection of data. According to Iranian law, there are no coeducational schools in Iran; some schools are for boys only whereas others are for girls only. Two of the boys' schools were private ones,

while only one girls' school was private. The rest were public schools. This matches the proportion of private and public schools in Iran relatively well. Data were collected during regular school lessons by the school psychologists.

The data for Study IV were collected in the following way:

In Iran, like in other countries, there are habilitation programs for prisoners and sometimes also for their family. In these programs, social workers, psychologists, or other specialists try to aid and support the prisoners in improving their abilities, mental health, life skills, or technical skills, making short or long term plans during their incarceration. Thanks to Gorgan's prison officials, we were able to conduct a short term program with women prisoners sentenced with the capital punishment. During one month, we had the chance to interview them and collect data. Due to the low educational level of some of them, and also in order to accelerate the process, the prisoners filled in the questionnaires with the aid of co-researchers.

2.4 Ethical Considerations

The data were collected with informed consent from, in the cases of Studies I – III, school officials, parents, and pupils. In the case of Study IV, informed consent was obtained from both prison officials and prisoners. Participation was in all cases voluntary. Full anonymity and confidentiality were observed. The study adhered to the principles concerning human research ethics of the Declaration of Helsinki (World Medical Association, 2013), as well as guidelines for the responsible conduct of research of The Finnish Advisory Board on Research Integrity (2012).

3. Overview of the Original Studies

3.1 Study I: Sex Differences in Mental Health among 13-15-Year-Old Adolescents in Iran and Finland

The aim of Study I was investigate sex differences in mental health in 13-15-year-old adolescents in Iran and Finland, in order to explore potential cultural influence on sex differences in mental health during early adolescence. The general finding from studies conducted across nations and cultures appears to be that the adolescent period is more demanding for girls than for boys, with higher scores on mental health problems and lower scores on measures of well-being (Nolen-Hoeksma & Girgus, 1994).

In Finland, this sex difference in adolescent mental health is also clearly seen. In a representative study conducted in 2013, covering the whole nation, it was found that 79% of boys had no signs of anxiety at all, but the same was true for only 56% of girls. Girls also had higher scores of school-burnout, fatigue, and somatic symptoms like headaches (Health and Welfare, 2014). Iran, however, is in cultural respects quite different from Finland. According to Hofstede's (1980) criteria, Iran is a collectivistic country while Finland is an individualistic one. Iran is an Islamic country, while Finland belongs to the Western cultural sphere. It is possible that the pattern of sex differences in mental wellbeing found in studies in Western countries are not found in Iran. The purpose of this study was to explore this issue.

Six hundred adolescents from Iran and 2,205 adolescents from Finland (age range 13-15 yrs.) completed a questionnaire consisting of three scales from the Brief Symptom Inventory (Derogatis, 1975), namely anxiety, hostility, and depression); one scale from the Ostrobothnian Youth Survey (Söderberg et al, 2016), body satisfaction and somatic symptoms; the Rosenberg (1965) Self-Esteem Scale; and the SCOFF index for eating disorders (Morgan, Reid, & Lacey, 1999)

The results showed that, against expectations based on studies conducted in the Western cultural sphere, no sex difference was found in the Iranian sample on any of the seven measures. In the Finnish sample, however, sex differences were found on all seven, indicating better mental health among boys than among girls, in this particular age group. The Finnish sample followed the pattern usually found in Western nations, with better mental health among adolescent boys than among adolescent girls.

The results suggest that the commonly found sex difference in mental health among adolescents may be a culturally based phenomenon rather than a universal sex difference during adolescence. More study on the subject is needed.

3.2 Study II: Social Functioning and Mental Wellbeing in 13- to 15-year-old Adolescents in Iran and Finland

The aim of Study II was to investigate social functioning and mental wellbeing in 13-15-year-old adolescents in Iran and Finland, in order to explore potential cultural and sex-based differences during early adolescence. As Study I, this study was explorative. The current study, however, focused also on interpersonal relations in the peer group, in combination with mental health aspects, others than those covered in Study I.

One thousand and one (1,001) adolescents from Iran and 2,205 adolescents from Finland (age range 13-15 years) completed a questionnaire consisting of the following scales: the Mini Direct and Indirect Aggression Scale (Mini-DIA) (Österman, 2010), the Self-Efficacy Questionnaire for Children (SEQ-C) (Muris, 2001), the School Burnout Inventory (SBI) (Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009), and the Multidimensional Scale for Perceived Social Support Assessment (MSPSSA) (Zimet, Dahlem, Zimet, & Farley (1988).

The findings showed that Iranian boys scored highest on aggression, victimization from others' aggression, and school burnout, and lowest on social support, academic self-efficacy, and interpersonal self-efficacy. Finnish boys scored highest on interpersonal self-efficacy

and emotional self-efficacy, and lowest on school burnout and victimization. Finnish girls had the highest scores on social support and academic self-efficacy, but the lowest on aggression and emotional self-efficacy. The Iranian girls did not have any highest or lowest scores in this sample.

Conclusively, clear differences due to culture and sex were found. It appears that Iranian boys, despite their higher social status than girls, experienced their school environment as more stressful than Iranian girls, and than Finnish boys as well.

3.3 Study III: Physical Punishment at Home and Victimization from Peer Aggression at School in Adolescents in Iran and Finland: A Mediation Analysis.

The aim of the study was to investigate whether depressive symptoms could serve as a mediator between the experience of physical punishment (PP) in childhood and victimization from peer aggression at school, as previously has been shown by Söderberg et al. (2016). In other words, it was an attempt to investigate whether the finding by Söderberg and colleagues had cross-cultural validity. The rationale for the study is that PP of young children at home may lead to revictimization in school: exposure to PP may lead to depression in the victimized child. This depression, in turn, may through nonverbal signals inform potential bullies/aggressors that the individual is an easy target to pick on. If depression functions as a mediator between PP at home and victimization from peer aggression at school, the hypothesis would be supported.

An aggregated sample consisting of 1,001 Iranian adolescents and 2,205 Finnish adolescents, all 13-15 years of age, participated in the study. The sample was the same as in previous studies in the current thesis. Data were analyzed with conditional process modeling (Preacher & Hayes, 2008). Two mediators were tested: (1) depression, and (2) the respondents' own level of aggressive behavior at school. The reason for the latter was that victimization and aggression usually

are highly correlated, and aggression may lead to victimization in the form of counter-attacks. Sex (female vs. male) and country (Iran vs. Finland) served as potential moderators in the analysis. PP was measured with the Brief Physical Punishment Scale (BPPS) by Österman and Björkqvist (2007), depression was measured with a subscale from the Brief Symptom Inventory (BSI) by Derogatis (1975), and aggression and victimization at school with the Mini Direct & Indirect Aggression Scale (Mini-DIA) by Österman and Björkqvist (2008).

The hypothesis was only partly corroborated. Depressive symptoms had a weak mediating effect. The results are thus somewhat different from those by Söderberg et al. (2016), based on a Finnish sample only. In particular, the Iranian boys stood out: in their case, there was absolutely no mediating effect of depressive symptoms at all. This finding indicates that more study is needed to investigate under which circumstances depression is mediating the link of revictimization under study.

The results showed that perpetration of peer aggression at school was a stronger mediator than depressive symptoms on the link between PP at home and victimization from peer aggression at school. This finding should not be surprising, since the correlation between aggression and victimization is high; those who get into a fight are also likely to become on the receiving end of others' aggression. It is for those who are only victims, and not perpetrators, that depressive symptoms should be expected to be a mediator.

3.4 Study IV: The Mental Wellbeing of Imprisoned Women in Iran

The aim of the study was to investigate the mental well-being of 35 women prisoners (mean age = 28.7, SD = 7.6) who all had received the capital punishment, in the Gorgan jail, northeastern Iran. Most of them had received their sentence for killing their husband.

A control sample of 35 women of the same age from Gorgan was included in the study design. The respondents filled in a paper-and-

pencil questionnaire, including the following scales: (1) aggression was measured with the Mini Direct and Indirect Aggression Inventory (Mini-DIA; Österman & Björkqvist, 2010); (2) victimization from others' aggression was measured with the victim version of the Mini-DIA (ibid.); (3) emotional self-efficacy was measured with the emotionality subscale of the Self efficacy Questionnaire (SEQ; Muris, 2001); (4) social support was measured with the Multidimensional Scale of Perceived Social Support Assessment (MSPSSA; Zimet, Dahlem, Zimet, & Farley, 1988). Three subscales from the Brief Symptom Inventory (BSI; Derogatis, 1975) were also included in the test battery: (5) depression, (6) hostility, and (7) anxiety. Some single items regarding family history and suicidal thoughts were also included.

The results showed that the imprisoned women scored higher than the controls on aggression, anxiety, and hostility; the controls scored higher than the imprisoned women on social support and emotional self-efficacy. The imprisoned women had, to a greater extent than the controls, a family history with addiction problems and suicidality.

The findings corroborate previous findings about the mental status among prisoners with a death sentence (cf. the review by Cunningham and Vigen, 2002). The results thus provide a similar picture of the mental health of individuals with a death sentence in Iran with that of death row inmates in for instance U.S.A. The study is unique because it is, to our knowledge, the first study in the world to focus solely on imprisoned women with a death sentence. However, it yielded similar results to studies having mainly men sentenced to death as respondents.

4. Conclusive Remarks

The current thesis is a compilation of articles investigating the mental health and well-being among Iranian adolescents (Studies I – III) and Iranian women prisoners who had received a death sentence for homicide. The studies on Iranian adolescents had a similar Finnish sample of adolescents as a comparison group, while the prison sample had a comparison group consisting of "normal", not incarcerated women from the city of Gorgan.

Remarkable differences between the Iranian and the Finnish adolescent samples were found. It appears that culture was responsible for more variation in mental health than sex, and that common sex differences found in Western countries could not be replicated in Iran. In the West, adolescent girls usually show poorer mental health and well-being than adolescent boys (Nolen-Hoeksma & Girgus, 1994). This was not the case here: in Study I, no sex difference was found in the Iranian sample on any of the seven mental health measures, while in the Finnish sample, sex differences were found on all seven. For some reason, Iranian girls, at least during young and middle adolescence, seem to live such a sheltered life that they experience less mental stress than Western girls usually do.

However, previous studies suggest the when they get older, mental health scores of female Iranians begin to resemble those of Western young women, and that similar sex differences start to emerge. The nationwide investigation of mental health among Iranians by Noorbala, Bagheri, Yazdi, Yasamy and Mohammad (2004), included 11,448 adolescents and young adults, aged 15-24 years. It was found that about one-fifth of the sample (25.9% of women and 14.9% of men) experienced mental disorders, with women facing a higher risk of such disorders than men.

Another notable finding in the current thesis is that Iranian adolescent boys appear to live under considerable strain. Study II found that Iranian boys, despite their higher social status than girls, experienced their school environment as more stressful than Iranian

girls, and also than boys from the Finnish comparison group. Iranian boys, in comparison with Finnish boys, and both Iranian and Finnish girls, scored highest on aggression, victimization from others' aggression, and school burnout, and lowest on social support, academic self-efficacy, and interpersonal self-efficacy. Obviously, Iranian adolescent boys experience a quite demanding environment. It may be that, being males in a highly patriarchal society, they experience high expectations and many responsibilities, such as taking care of the female members of the family.

There are certain limitations to the studies. The foremost limitation is that these are not longitudinal studies, and conclusions about cause and effect cannot be drawn with certainty. For instance in Study III (with depression as a potential mediator between physical punishment at home and victimization from school aggression at school), we cannot show that the level of depression of the adolescents is associated with physical punishment, although there is a significant relationship between the two. Also in Study IV, we may not conclude with certainty that the mental ill-being of the female prisoners is a consequence of their incarceration and death sentence (although it appears to be a plausible hypothesis); it is possible that their mental health was poor already before their imprisonment.

Another limitation is that the data were collected in a specific city in northeastern Iran, i.e. Gorgan. We do not know whether the findings may be generalizable to other areas of Iran. The samples could also have included respondents from a greater variety of age groups (younger and older). In Study IV, there was only data from female prisoners; it could have been valuable to add a sample of male prisoners, for comparison. Future studies could try to amend these limitations.

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Jalal Khademi

Aspects of Mental Health in Adolescents and Female Prisoners in Present-Day Iran

The general aim of this study was to investigate issues of mental health and well-being in modern day Iran, primarily among adolescents in school settings, but also in prisoners who had received the death sentence.

According to the results of this thesis, culture was responsible for more variation in mental health than sex, and the common sex differences found in Western countries were not replicated in Iran. In the West, adolescent girls usually show poorer mental health and well-being than adolescent boys. This was not the case in Iran.

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