

**Psychometric Properties of the Finnish Version of the Inventory of School  
Attendance Problems**

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Master's Thesis in Psychology

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| <p><b>Abstract:</b></p> <p>School attendance problems (SAPs) refer to different kinds of short- or long-term school absences, as well as difficulties attending or staying in school. Questionnaires intended to assess SAPs have usually focused on measuring either the symptoms of SAPs or the functions of the absence. The Inventory of School Attendance Problems (ISAP) was developed to measure both the symptoms that cause absence and the functions of the absence. The initial results of the psychometric properties of ISAP were promising but needed further testing in community samples to establish its usefulness for assessing emerging SAPs. The current study analyzed the psychometric properties of ISAP by evaluating model fit in a confirmatory factor analysis (CFA), by measuring internal consistency through Cronbach’s alpha, and by measuring convergent validity by comparing the factors of ISAP with similar factors of other inventories. The data were collected through a web survey during the spring of 2021. The sample was non-clinical and consisted of 451 Finnish-speaking students aged 12–16 from seven different schools in Southern and Western Finland. The results showed that items loaded on the expected factors, the model fit partially reached adequate levels, the internal consistency reached adequate levels, and evidence of convergent validity was found. These findings partly support the structure of ISAP, and largely indicate that ISAP is a valid and reliable measure of school attendance problems in the Finnish, non-clinical population. The instrument may be resourceful in identifying early signs of school attendance problems. Further analyses of the psychometric properties are recommended.</p> |                       |
| <b>Keywords:</b> school absence, assessment, Inventory of School Attendance Problems, psychometric properties, confirmatory factor analysis  |                       |
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| <p><b>Abstrakt:</b></p> <p>Frågeformulär som utvecklats för att utreda skolfrånvaroproblem har oftast antingen fokuserat på symtomen som lett till frånvaro, eller på de funktioner som frånvaron fyller. Då Inventory of School Attendance Problems (ISAP) utvecklades var syftet att mäta både de symptom som orsakar frånvaro och de funktioner frånvaron har. Den första analysen av ISAPs psykometriska egenskaper gav lovande resultat, men för att vidare etablera formulärets användbarhet för att upptäcka begynnande frånvaroproblem behövde modellen ytterligare testas. Denna studie analyserade ISAPs psykometriska egenskaper genom att utvärdera model fit i en konfirmatorisk faktoranalys, genom att mäta den interna konsistensen i form av Cronbachs alfa och genom att mäta den konvergenta validiteten i form av en jämförelse mellan ISAPs faktorer och liknande faktorer i andra frågeformulär. Datat samlades in genom en webb-enkät under våren 2021. Samplet var icke-kliniskt, och bestod av 451 finskspråkiga elever i åldrarna 12–16 från sju olika skolor i södra och västra Finland. Resultatet visade att frågorna laddade på de förväntade faktorerna, model fit nådde delvis adekvata nivåer, intern konsistens nådde adekvata nivåer och konvergent validitet konstaterades. Dessa resultat stöder delvis modellen för ISAP, och tyder i hög grad på att det är ett valitt och reliabelt mått av skolfrånvaroproblem i den finska, icke-kliniska populationen. ISAP kan vara användbart i syfte att upptäcka tidiga tecken på skolfrånvaroproblem. Fler analyser av de psykometriska egenskaperna rekommenderas.</p> |                     |
| <b>Nyckelord:</b> skolfrånvaro, utvärdering, Inventory of School Attendance Problems, psykometriska egenskaper, konfirmatorisk faktoranalys   |                     |
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## 1 INTRODUCTION

Attending school is crucial for the youth's educational, socio-emotional, and personal development. In the school context, the child learns social skills, emotional skills, responsibilities, and to obtain healthy routines (Carroll, 2010; Gottfried, 2014). Individuals attending school consistently tend to have a longer life expectancy, better work opportunities, and lead a less criminal life (Rocque et al., 2017).

Conversely, school absenteeism may have severe consequences. For instance, school absenteeism has been associated with poorer grades and poorer academic achievement, and a decline in social engagement (Carroll, 2010; Credé et al., 2010; Gottfried, 2009, 2014). Moreover, school absenteeism has been associated with risk behavior, such as alcohol, tobacco and drug use (Henry & Huizinga, 2007). Connections have also been found between school absenteeism and negative outcomes in adulthood, such as employment difficulties, criminality, aggressive behavior, overall adjustment problems, and substance abuse (Rocque et al., 2017).

Associations between school absence and mental health problems have been identified, meaning that psychiatric conditions may cause school children to be absent (Kearney, 2008). Other risk factors are for instance somatic problems, considerable life changes (for example parents' separation or school transition), a negative thinking pattern, difficulties regulating emotions, limited problem-solving skills, being bullied, loneliness, educational difficulties, a problematic relation to the teacher, problematic family functioning, and parental mental health problems (Ingul et al., 2019).

School attendance problems (SAPs) refer to different kinds of short- or long-term absences, as well as difficulties attending or staying in school (Kearney, 2016). When assessing school attendance problems, the multifaceted nature of the phenomenon needs to be accounted for. It is not only necessary to know how much the child is absent, but also what the symptoms and functions associated with SAPs are – in other words, what aversive thoughts, feelings or experiences have led to the absence, and what the absence is a relief from or aspiration for. Also, contextual factors need to be accounted for: the home environment and the school environment, with the potential pressure for educational achievement and the need for acceptance amongst peers, may contribute to the difficulties (Elliott & Place, 2019). Further, it is important to consider for how long the SAPs have been present. The longer the time, the more difficult it is to break the absence pattern. Parents, teachers, and health care personnel must recognize early signs of SAPs (especially anxiety,

depression, and somatic complaints), register them, and start collaborating at early stages (Ingul et al., 2019).

According to Gren Landell (2020), an assessment should be multidisciplinary, meaning that SAPs should be analyzed through pedagogical, social, psychological, and medical perspectives. Further, Gren Landell argues for an assessment to be multimodal, meaning that different methods for gathering information about the problem should be used. The main assessment methods of SAPs are interviews, behavioral observations, and questionnaires. Reports from and interviews with parents and teachers provide additional information about family and school contexts, and behavioral observation provide more direct and objective information (Elliott & Place, 2019; González et al., 2021). The drawback of a thorough and extensive assessment is that it is time consuming. It is desirable that the assessment method is quick. Another desirable aspect is that it could be administered interprofessionally, meaning that more people could make use of it and, thus, more children be assessed (Gren Landell, 2020). Also, it is crucial for it to be reliable and valid. Questionnaires possess the benefit of being easily administrable and are, compared to the other methods mentioned, relatively easy to determine the reliability and validity for.

Prior assessment scales have typically focused on either the symptoms, for example scales like the Beck Depression Inventory-II (BDI-2; Beck et al., 1996), or the functions, such as the School Refusal Assessment Scale-Revised (SRAS-R; Kearney, 2002), of SAPs. The Inventory of School Attendance Problems (ISAP; Knollmann et al., 2019) was developed to detect both symptoms associated with SAPs and the functions of the school absence. ISAP was also intended to detect early signs of SAPs, as it accounts for children attending school but with difficulties doing so. The initial research conducted with ISAP was done on a clinical sample in Germany, which generated good psychometric properties. However, further research on ISAP is needed to establish the validity and reliability of the questionnaire. Also, tests in community samples have been called for, to determine whether the questionnaire is of use for early identification of SAPs. Moreover, it is needed for ISAP to be tested in other countries. Knollmann and colleagues made an exploratory factor analysis when developing ISAP, and recommended subsequent confirmatory factor analyses to be conducted on the instrument.

## **1.2 The current study**

The aim of the current study was to assess the psychometric properties of ISAP in a Finnish, non-clinical sample. More specifically, the factor structure, internal consistency, and convergent validity of the instrument were tested. The hypotheses of the current study were

that the 13-factor solution would be supported, that adequate levels of internal consistency would be found, and that when comparing ISAP with other instruments, the highest correlations would be found between the scales that are measuring similar constructs.

## **2 METHODS**

### **2.1 Procedure**

Data were collected in April and May 2021 using a web survey. The question battery consisted of three questionnaires, and some additional questions regarding background variables and the Covid-19 pandemic. The participating schools were recruited via different channels (snowball sampling, mailing lists, a starting seminar). All in all, seven Finnish schools, where the students spoke Finnish, participated. The schools informed the parents and the adolescents about the study in advance. If the adolescents were younger than 15, informed consent was collected from both the adolescent and the parents. Adolescents aged 15 and older gave their consent when filling out the form. Since the questionnaire was filled out during the school day, it is probable to assume that some school children with school attendance problems were not present at this moment. Special-education teachers were asked to help reach out to some children with high absence rates and collect data from them.

### **2.2 Ethical considerations**

The research ethics committee of Åbo Akademi University approved the study in May 2020.

### **2.3 Sample**

The collected sample consisted of  $N = 971$  Finnish-speaking respondents from the South and West of Finland, 291 of whom were excluded because informed consent for participating in the study was missing. Furthermore, 107 respondents were excluded because they had not reported their age or reported either being younger than 12 or older than 16 years of age. Additionally, 94 respondents on the symptom scale and 121 respondents on the function scale had more than 30 % of missing answers on the ISAP questions. Therefore, they were excluded from the analysis. The number of respondents with high absence rates, to whom special-education teachers reached out, was small ( $N = 14$ ) and none made it through the exclusion process. After the exclusion process and the mergence of the symptom and function scales, the final sample on which the analyses were conducted consisted of 451 respondents (258 girls, 177 boys, 15 others, 1 missing). The average age was 14.4 ( $SD = .94$ ).

### **2.4 Measures**

The current study measured school attendance problems with the Inventory of School Attendance Problems (ISAP; Knollmann et al., 2019), and the School Refusal Assessment

Scale-Revised (SRAS-R; Kearney, 2002). Additionally, data about the youth's behavioral strengths and hardships were collected using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). All three questionnaires had been translated into Finnish prior to the execution of the current study.

#### **2.4.1 *Inventory of School Attendance Problems***

The Inventory of School Attendance Problems (ISAP) was developed by a German team, led by the psychologist Martin Knollmann (Knollmann et al., 2019). ISAP was translated into Finnish and piloted by Johanna Sergejeff and her coworkers (Tuettua Verkko-Opetusta Erityistilanteissa, 2020). The current study focused on the child version of ISAP, which was developed to be answered by 11–18-year-olds. The questionnaire includes both a symptom scale and a function scale. ISAP consists of 13 factors, which encompass internalized and externalized problems as well as problems that are linked to the family context and the school context: 1) Depression, 2) Social anxiety, 3) Separation anxiety, 4) Performance anxiety, 5) Agoraphobia/Panic 6) Somatic complaints, 7) School aversion/attractive alternatives, 8) Aggression, 9) Problems with peers 10) Problems with teachers, 11) Dislike of specific school, 12) Problems within the family, and 13) Problems with parents. In total there are 48 items, each consisting of a symptom statement, for example “I feel excluded by my classmates”, to which the participant rates how well that describes his or her situation on a 4-point Likert scale, from 0 = “*Not true at all/Never*” to 3 = “*Very much true/Very often*”. Then the participant rates, again on a 4-point Likert scale, to what degree that symptom causes him or her to be absent from school or to what degree it makes him or her feel that attending school is difficult. At the beginning of the questionnaire, there are some introductory questions regarding how many days one has been absent lately, whether the absence has been approved by a parent, which situations during the school day that feel difficult, for example “to wake up in the morning” and “to walk into class”, and whether one is alone or together with someone when absent.

When ISAP was first analyzed, the internal consistency was shown to be ranging from acceptable to good ( $0.75 \leq \alpha \leq 0.88$ ), and when comparing ISAP to other, similar scales, construct validity was supported (Knollmann et al., 2019).

#### **2.4.2 *School Refusal Assessment Scale Revised***

One of the most widely used scales for assessing school absenteeism (González et al., 2021) is the School Refusal Assessment Scale Revised (SRAS-R), which consists of a child version (SRAS-R-C) and a parent version (SRAS-R-P). In the current study only the child version, which can be used for children aged 8-17, was used.



SRAS aims at analyzing the functions of being absent from school. It was first developed in 1993 (Kearney & Silverman, 1993) and it was later revised (SRAS-R; Kearney, 2002). The questionnaire defines four distinctive factors for why students are absent from school: 1) avoidance of stimuli provoking negative affectivity (ANA), 2) escape from aversive social and/or evaluative situations (ESE), 3) pursuit of attention from others (PA), and 4) pursuit of tangible reinforcements outside of school (PTR). The questionnaire consists of six items per factor, resulting in 24 items in total, for example “How often would you rather be with your parents than being at school?”, which are answered on a 7-point Likert-scale from 0 = “Never” to 6 = “Always”.

In the current study, the scale intercorrelations ranged between .45 and .78. Cronbach’s alpha ranged between .74 and .89, meaning that the internal consistency reached an acceptable level for one, and good levels for three of the scales.

#### **2.4.3 Strengths and Difficulties Questionnaire**

Strengths and Difficulties Questionnaire (SDQ; Goodman, 1994) was developed as a screening tool for emotional and behavioral hardships, but also for assets, of children and adolescents. There are three versions of the questionnaire: a brief form, a form with an impact supplement that measures how much the difficulties affect the child, and a form with the impact supplement and follow-up questions meant for post-interventions (Goodman, 1999). In the current study the self-report version of the brief form was used, which is intended for 11–16-year-olds. It consists of 25 items, for example, “I worry a lot”, that are evenly distributed on five different factors: 1) Emotional symptoms, 2) Conduct problems, 3) Hyperactivity/Inattention, 4) Peer relationship problems, and 5) Prosocial behavior. The questions are answered by choosing one of the following alternatives on a 3-point Likert scale: “Not true”, “Somewhat true”, or “Certainly true”. “Somewhat true” is always graded with 1 point, whereas “Not true” and “Certainly true” are graded with either 0 or 2 points, depending on how the question is framed since five of the questions are reversed.

In the current study, the scale intercorrelations ranged between -.16 and .48. Cronbach’s alpha ranged from .54 to .79, meaning that two of the scales did not reach acceptable levels of internal consistency. The scales with poor internal consistency were Peer relationships problems and Conduct problems.

## **2.5 Data analysis**

IBM SPSS Statistics 27 was used for generating descriptive statistics of the sample, and for excluding respondents who had not explicitly given consent or who were not of the targeted age. The rest of the analyses were conducted in R version 4.2.2 (“Innocent and

Trusting”). The package tidyverse 2.0.0 was used for data cleaning and plotting, mice 3.16.0 was used for multiple imputation, corrplot 0.92 was used for correlation matrix between items, and lavaan 0.6-16 was used for the confirmatory factor analysis.

A confirmatory factor analysis was conducted to test the factorial structure of ISAP. Model fit was evaluated by using the following indices: Chi-square ( $\chi^2$ ); comparative fit index (CFI); standardized root mean square residual (SRMR); and root mean square error of approximation (RMSEA). Rex Kline’s guidelines (2005) of  $CFI \geq .90$  and  $RMSEA \leq .08$  were adopted. For SRMR the limit of  $\leq .08$  was used. Internal consistency was evaluated by calculating Cronbach’s alpha for the 26 factors. The limit for acceptable levels  $\geq .70$ . Convergent validity was evaluated by testing how highly factors of ISAP correlated with corresponding factors of SDQ, as well as of SRAS- R. Since the data was ordinal level and skewed, weighted least squares (WLS) was used as estimation method.

### **3 RESULTS**

#### **3.1 Factor analysis**

When evaluating the structure of ISAP, the symptom scale and the function scale were analyzed separately. The scale intercorrelations ranged between .17 and .72 (Table 1 and 2). The standardized item-to-factor loadings ranged between .50 and .92. The items loaded on the expected factors (Figure 1 and 2).

The model fit indices for the symptom scales were:  $\chi^2 (1002, N = 479) = 1441.30, p < .01$ ;  $CFI = .80$ ;  $RMSEA = .03, 90\% CI [.027, .034]$ ; and  $SRMR = .05$ . For the function scales the model fit indices were:  $\chi^2 (1002, N = 452) = 1196.56, p < .01$ ;  $CFI = .74$ ;  $RMSEA = .02, 90\% CI [.016, .025]$ ; and  $SRMR = .06$ . Since some of the model fit indices did not reach adequate levels, modification indices were examined. Cross-loadings were found, where items 21, 2, and 48 on the symptom scale as well as items 21, 41, and 45 on the function scale loaded on several factors.

#### **3.2 Internal consistency**

Cronbach’s alpha for the 26 symptom and function scales of ISAP ranged between .74 and .91 (3-6 items per scale, see Figure 1 and 2). Thus, the internal consistency was

**Table 1***ISAP symptom. Scale intercorrelations*

|      | 1 | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    |
|------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ISAP |   |       |       |       |       |       |       |       |       |       |       |       |       |
| 1    | 1 | .68** | .30** | .64** | .50** | .60** | .58** | .62** | .55** | .44** | .50** | .44** | .49** |
| 2    |   | 1     | .36** | .56** | .60** | .47** | .41** | .50** | .58** | .39** | .37** | .37** | .43** |
| 3    |   |       | 1     | .36** | .37** | .24** | .24** | .30** | .32** | .29** | .20** | .36** | .26** |
| 4    |   |       |       | 1     | .44** | .45** | .42** | .52** | .45** | .34** | .41** | .37** | .37** |
| 5    |   |       |       |       | 1     | .45** | .32** | .41** | .52** | .38** | .30** | .36** | .44** |
| 6    |   |       |       |       |       | 1     | .43** | .50** | .38** | .42** | .33** | .37** | .42** |
| 7    |   |       |       |       |       |       | 1     | .51** | .42** | .40** | .45** | .17** | .33** |
| 8    |   |       |       |       |       |       |       | 1     | .48** | .49** | .46** | .33** | .45** |
| 9    |   |       |       |       |       |       |       |       | 1     | .36** | .36** | .28** | .40** |
| 10   |   |       |       |       |       |       |       |       |       | 1     | .43** | .29** | .42** |
| 11   |   |       |       |       |       |       |       |       |       |       | 1     | .26** | .38** |
| 12   |   |       |       |       |       |       |       |       |       |       |       | 1     | .45** |
| 13   |   |       |       |       |       |       |       |       |       |       |       |       | 1     |

\* $p < .05$ ; \*\* $p < .01$

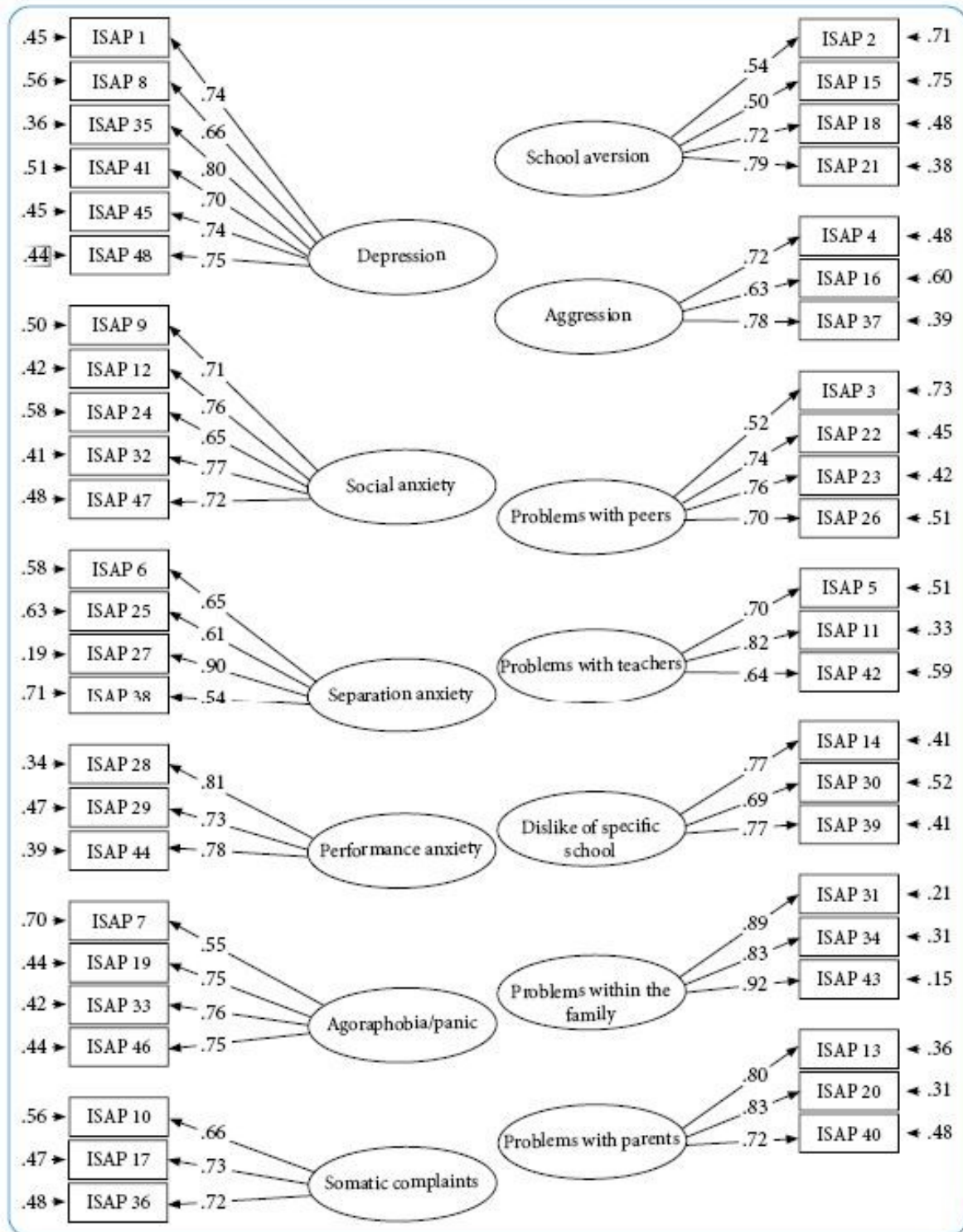
**Table 2***ISAP function. Scale intercorrelations*

|      | 1 | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    | 13    |
|------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ISAP |   |       |       |       |       |       |       |       |       |       |       |       |       |
| 1    | 1 | .69** | .43** | .67** | .55** | .59** | .72** | .58** | .61** | .56** | .55** | .45** | .43** |
| 2    |   | 1     | .52** | .69** | .60** | .48** | .63** | .55** | .58** | .61** | .51** | .45** | .47** |
| 3    |   |       | 1     | .46** | .55** | .36** | .43** | .47** | .48** | .55** | .48** | .56** | .52** |
| 4    |   |       |       | 1     | .62** | .51** | .59** | .57** | .61** | .66** | .54** | .48** | .48** |
| 5    |   |       |       |       | 1     | .45** | .51** | .58** | .58** | .64** | .56** | .49** | .62** |
| 6    |   |       |       |       |       | 1     | .56** | .45** | .48** | .46** | .39** | .35** | .39** |
| 7    |   |       |       |       |       |       | 1     | .57** | .60** | .56** | .52** | .35** | .44** |
| 8    |   |       |       |       |       |       |       | 1     | .52** | .59** | .63** | .47** | .62** |
| 9    |   |       |       |       |       |       |       |       | 1     | .51** | .53** | .36** | .47** |
| 10   |   |       |       |       |       |       |       |       |       | 1     | .58** | .47** | .53** |
| 11   |   |       |       |       |       |       |       |       |       |       | 1     | .59** | .54** |
| 12   |   |       |       |       |       |       |       |       |       |       |       | 1     | .59** |
| 13   |   |       |       |       |       |       |       |       |       |       |       |       | 1     |

\* $p < .05$ ; \*\* $p < .01$

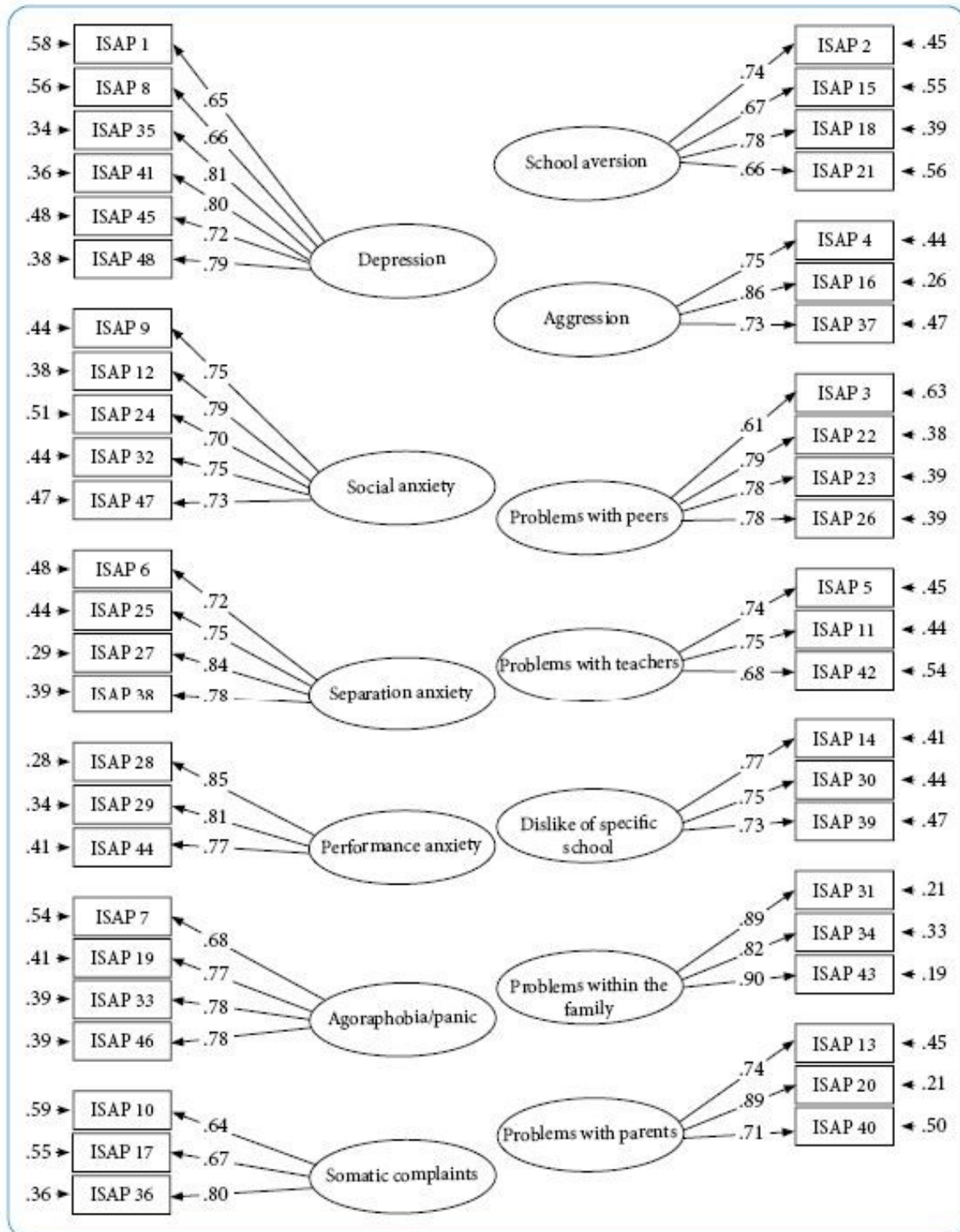
**Figure 1**

*ISAP symptom. Factor loadings*



**Figure 2**

*ISAP function. Factor loadings*



excellent for 2, good for 15, and acceptable for 9 of the scales (Table 3).

### 3.3 Convergent validity

Overall, the symptom factors of ISAP largely showed medium to high correlations with the factors of SRAS-R and SDQ (Table 4). Depression showed the highest correlations: with Avoidance of stimuli provoking negative affectivity (ANA) ( $r = .72$ ), with Escape from aversive social and/or evaluative situations (ESE) ( $r = .56$ ), and with Emotional symptoms ( $r = .71$ ). Social anxiety also showed high correlations: with ANA ( $r = .61$ ), with ESE ( $r = .56$ ), and with Emotional symptoms ( $r = .66$ ). Performance anxiety correlated highly with ANA ( $r = .63$ ) and with Emotional symptoms ( $r = .53$ ). Aggression correlated highly with Emotional symptoms ( $r = .53$ ), Conduct problems ( $r = .55$ ), and Hyperactivity ( $r = .51$ ). Problems with peers correlated highly with Emotional symptoms ( $r = .52$ ), ANA ( $r = .50$ ), and ESE ( $r = .51$ ). The factors Agoraphobia/panic, Somatic complaints, School aversion, Problems with teachers, Dislike of specific school and Problems with parents showed medium to small correlations with the factors of SRAS-R and SDQ. The factors Separation anxiety and Problems within the family showed generally lower correlations with the factors of SRAS-R and SDQ. The ISAP symptom factors showed least correlation with the SRAS-R factors pursuit of attention from others (PA) ( $r = .12 - .40$ ) and pursuit of tangible reinforcement (PTR) ( $r = .18 - .44$ ).

Overall, the function factors of ISAP showed low to medium correlations with the factors of SRAS-R and SDQ (Table 5). Compared to the symptom version, the correlations in the function version were generally lower. School aversion, Problems with peers, and Problems with teachers showed medium correlations with Emotional symptoms, Conduct problems, Hyperactivity, Peer problems, ANA, and ESE. Separation anxiety, Problems within the family, and Problems with parents showed low correlations with most of the factors of SRAS-R and SDQ. The ISAP function factors showed least correlation with PA ( $r = .17 - .32$ ) and PTR ( $r = .08 - .40$ ). However, Depression showed high correlations with ANA ( $r = .53$ ) and with Emotional symptoms ( $r = .50$ ).

**Table 3***M, 95% confidence interval around the mean, SD, and internal consistency: Cronbach's  $\alpha$* 

|                                | Symptom              |                     | Function            |                     |
|--------------------------------|----------------------|---------------------|---------------------|---------------------|
|                                | M [CI] (SD)          | Cronbach's $\alpha$ | M [CI] (SD)         | Cronbach's $\alpha$ |
| 1. Depression                  | .64 [.58-.70] (.65)  | .87                 | .27 [.22-.31] (.49) | .87                 |
| 2. Social anxiety              | .50 [.44-.56] (.65)  | .84                 | .20 [.16-.25] (.47) | .86                 |
| 3. Separation anxiety          | .27 [.23-.31] (.46)  | .79                 | .08 [.05-.10] (.29) | .85                 |
| 4. Performance anxiety         | .68 [.61-.75] (.75)  | .82                 | .23 [.18-.28] (.55) | .85                 |
| 5. Agoraphobia/panic           | .24 [.19-.28] (.48)  | .80                 | .11 [.08-.15] (.37) | .84                 |
| 6. Somatic complaints          | .56 [.51-.62] (.60)  | .74                 | .37 [.32-.42] (.55) | .74                 |
| 7. School aversion             | .97 [.90-1.04] (.71) | .74                 | .25 [.20-.29] (.47) | .80                 |
| 8. Aggression                  | .64 [.57-.70] (.67)  | .75                 | .13 [.10-.17] (.39) | .82                 |
| 9. Problems with peers         | .35 [.30-.41] (.56)  | .77                 | .17 [.13-.21] (.44) | .83                 |
| 10. Problems with teachers     | .34 [.29-.39] (.55)  | .74                 | .14 [.10-.17] (.39) | .77                 |
| 11. Dislike of specific school | .42 [.36-.48] (.64)  | .78                 | .14 [.10-.18] (.41) | .80                 |
| 12. Problems within the family | .27 [.22-.32] (.56)  | .91                 | .11 [.07-.15] (.39) | .90                 |
| 13. Problems with parents      | .21 [.17-.26] (.49)  | .82                 | .08 [.05-.11] (.34) | .82                 |



**Table 4***ISAP symptom. Convergent validity*

|                                | SDQ                |                  |                |               | SRAS-R |      |      |      | Extent of school absenteeism |
|--------------------------------|--------------------|------------------|----------------|---------------|--------|------|------|------|------------------------------|
|                                | Emotional symptoms | Conduct problems | Hyper-activity | Peer problems | ANA    | ESE  | PA   | PTR  |                              |
| ISAP symptom                   |                    |                  |                |               |        |      |      |      |                              |
| 1. Depression                  | .71*               | .35*             | .46*           | .44*          | .72*   | .56* | .34* | .29* | .26*                         |
| 2. Social anxiety              | .66*               | .28*             | .30*           | .46*          | .61*   | .56* | .35* | .22* | .14*                         |
| 3. Separation anxiety          | .30*               | .16*             | .10*           | .19*          | .27*   | .23* | .40* | .23* | .07                          |
| 4. Performance anxiety         | .53*               | .25*             | .36*           | .29*          | .63*   | .49* | .39* | .31* | .21*                         |
| 5. Agoraphobia/panic           | .49*               | .30*             | .35*           | .32*          | .47*   | .46* | .32* | .20* | .14*                         |
| 6. Somatic complaints          | .54*               | .24*             | .33*           | .28*          | .48*   | .42* | .31* | .25* | .37*                         |
| 7. School aversion             | .34*               | .31*             | .44*           | .24*          | .43*   | .34* | .30* | .44* | .27*                         |
| 8. Aggression                  | .53*               | .55*             | .51*           | .34*          | .48*   | .39* | .22* | .25* | .22*                         |
| 9. Problems with peers         | .52*               | .31*             | .29*           | .49*          | .50*   | .51* | .29* | .24* | .12*                         |
| 10. Problems with teachers     | .32*               | .34*             | .34*           | .30*          | .37*   | .33* | .23* | .20* | .17*                         |
| 11. Dislike of specific school | .33*               | .35*             | .34*           | .28*          | .38*   | .33* | .23* | .22* | .17*                         |
| 12. Problems within the family | .37*               | .19*             | .18*           | .20*          | .38*   | .32* | .19* | .18* | .12*                         |
| 13. Problems with parents      | .39*               | .37*             | .33*           | .35*          | .39*   | .36* | .12* | .18* | .11*                         |

\* $p < .05$ 

ANA = avoidance of stimuli provoking negative affectivity; ESE = escape from aversive social and/or evaluative situations; PA = pursuit of attention; PTR = pursuit of tangible reinforcement.

**Table 5***ISAP function. Convergent validity.*

|                                | SDQ                |                  |                |               | SRAS-R |      |      |      | Extent of school absenteeism |
|--------------------------------|--------------------|------------------|----------------|---------------|--------|------|------|------|------------------------------|
|                                | Emotional symptoms | Conduct problems | Hyper-activity | Peer problems | ANA    | ESE  | PA   | PTR  |                              |
| ISAP function                  |                    |                  |                |               |        |      |      |      |                              |
| 1. Depression                  | .50*               | .31*             | .33*           | .35*          | .53*   | .44* | .29* | .23* | .40*                         |
| 2. Social anxiety              | .47*               | .29*             | .32*           | .38*          | .46*   | .46* | .29* | .19* | .24*                         |
| 3. Separation anxiety          | .23*               | .22*             | .14*           | .30*          | .22*   | .26* | .25* | .12* | .08                          |
| 4. Performance anxiety         | .43*               | .28*             | .30*           | .34*          | .48*   | .42* | .32* | .22* | .20*                         |
| 5. Agoraphobia/panic           | .32*               | .32*             | .27*           | .33*          | .35*   | .39* | .27* | .13* | .16*                         |
| 6. Somatic complaints          | .35*               | .24*             | .25*           | .27*          | .35*   | .34* | .24* | .17* | .39*                         |
| 7. School aversion             | .36*               | .34*             | .30*           | .30*          | .35*   | .35* | .22* | .26* | .36*                         |
| 8. Aggression                  | .31*               | .37*             | .27*           | .32*          | .29*   | .33* | .20* | .14* | .18*                         |
| 9. Problems with peers         | .40*               | .32*             | .30*           | .42*          | .44*   | .47* | .28* | .21* | .25*                         |
| 10. Problems with teachers     | .31*               | .33*             | .30*           | .33*          | .30*   | .30* | .18* | .11* | .20*                         |
| 11. Dislike of specific school | .26*               | .32*             | .31*           | .30*          | .28*   | .35* | .24* | .19* | .19*                         |
| 12. Problems within the family | .23*               | .31*             | .24*           | .23*          | .24*   | .25* | .17* | .12* | .11*                         |
| 13. Problems with parents      | .20*               | .33*             | .21*           | .26*          | .25*   | .28* | .18* | .14* | .11*                         |

\* $p < .05$ 

ANA = avoidance of stimuli provoking negative affectivity; ESE = escape from aversive social and/or evaluative situations; PA = pursuit of attention; PTR = pursuit of tangible reinforcement.

The aim of the current study was to analyze the psychometric properties of the Inventory of School Attendance Problems (ISAP) by testing it in a Finnish, non-clinical sample. Currently, the psychometric properties of the Inventory of School Attendance Problems had only been analyzed through an exploratory factor analysis during the creation of the questionnaire. Moreover, the questionnaire had only been tested in a clinical sample.

The results showed that items loaded on the expected factors. It was also hypothesized that all model fit indices would reach adequate levels, however only two of the four indices did. As expected, internal consistency reached adequate levels. Lastly, it was hypothesized to find convergent validity between factors in ISAP and similar factors in SRAS-R and SDQ. Evidence of convergent validity was largely found.

#### **4.1 Key findings and interpretations**

The items loaded on the expected factors, but model fit indices were only partly adequate. Chi-square was significant for both the symptom scale and the function scale, and CFI did not reach the commonly held threshold of  $\geq .90$  in neither the symptom scale nor the function scale. Not reaching acceptable levels in model fit could be due to variation in context, where the current study is conducted in another type of sample in another country. However, the model fit indices RMSEA and SRMR reached adequate levels, indicating that the data fit the model.

When looking at the modification indices, suggested change is to be done to item 21 “I think it is OK if I skip school every now and then” which belongs to School aversion, as it loaded on all the other twelve factors in the symptom version and on ten other factors in the function version. Additionally, item 2 “I would rather do something at home that is more fun than school”, which belongs to School aversion, loaded on eleven other factors, and item 48 “I think that I will never be able to solve my school problems”, which belongs to Depression, loaded on eight other factors in the symptom version. Item 41 “I have no hope anymore that my school situation will get better”, which belongs to Depression, loaded on ten other factors; and item 45 “I am sad”, which also belongs to Depression, loaded on ten other factors in the function version. This implies that these items suit several other problem areas, and are too non-specific. As the current study is explorative and an early contribution to the validation of ISAP, it was decided not to trim the model according to the modification indices for further testing.

The internal consistency of the 26 scales reached adequate levels, which indicates support for the reliability of ISAP. This is in line with Knollmann’s results (2019). This

indicates that the different items in the same factor produce similar scores. Especially the items in Problems within the family generate similar answers. Somatic complaints had the lowest internal consistency, meaning that the items generate somewhat dissimilar answers – however, the internal consistency was acceptable.

Regarding convergent validity, it was expected for the scales measuring internalized problems in ISAP (Depression, Social anxiety, Separation anxiety, Performance anxiety, Agoraphobia/panic, Somatic complaints) to correlate with the scales measuring internalized problems in SDQ (Emotional symptoms) and SRAS-R (ANA and ESE). Except for Separation anxiety, all the scales measuring internalized problems in both the symptom and the function version of ISAP correlated highly to moderately with Emotional symptoms, ANA and ESE. Taken together, convergent validity was largely shown regarding the internalized factors. Further, it was expected for the scales measuring externalized problems in ISAP (School aversion and Aggression) to correlate with the scales measuring externalized problems in SDQ (Conduct problems, Hyperactivity) and SRAS-R (PA and PTR). In the symptom version, moderate correlations were found between School aversion and the externalized-problem factors of SDQ and SRAS-R, whereas Aggression correlated highly with Conduct problems and Hyperactivity but showed low correlations with PA and PTR. In the function version, the correlations were generally lower. However, some support for convergent validity was found as School aversion showed moderate correlations with Conduct problems and Hyperactivity, and Aggression showed moderate correlation with Conduct problems. Taken together, convergent validity was partly shown regarding the externalized factors. The lower correlations on the function version of ISAP might be due to lower answering adherence on the function questions. It could also be due to few respondents having these problems, resulting in no patterns being found. In other words, the results would be different if based on a clinical sample. The ISAP factors had lowest associations with the SRAS-R factors PA and PTR.

## **4.2 Strengths**

When questionnaires are developed, it is recommended to conduct confirmatory factor analyses (Brown, 2015). CFAs will show whether subsequent analyses of the factors of ISAP are in agreement with Knollmann's original construct (2019). The current study is an early contribution to that consistency testing, and it shows indications for what could be improved in ISAP.

At the time of writing, ISAP had only been tested in Germany and therefore the current study provides information about the applicability of ISAP in Finland as well, which

adds information about the questionnaire's international suitability. Furthermore, for professionals dealing with SAPs in Finland the current study provides valuable information about a new and comprehensive screening tool that can further assist them in their work.

The original study was conducted on a clinical sample. To be certain of its use as a screening tool amongst the general population of students, as well as to see whether the questionnaire indeed identifies students that do attend school but are struggling to do so (unnoticed by teachers or parents), the questionnaire needed to be tested in a non-clinical sample.

### **4.3 Limitations and future directions**

The drawback with questionnaires is that the answers are not objective. The respondent's perception about a situation mentioned in the questionnaire might not reflect the reality. Adolescents might have difficulties recognizing symptoms of distress, why one is absent, or how much one has been absent. Also, the respondent might not want to answer the questions truthfully. This must be kept in mind when reading the current study. Therefore, a suggestion for future research is to compare answers of parents (using the parent version of ISAP) to the answers of their adolescents.

Despite some of the model fit indices not reaching adequate levels, no trimming of the model was done as the current study was explorative and an early analysis of ISAP. Future researchers of ISAP are advised to test whether some of the items of School aversion and Depression could be improved.

Another limitation in this study was that the survey was lengthy. ISAP itself is an extensive questionnaire. Although thoroughness is good as more information is covered, it costs as the respondents lose motivation and grow tired of answering the questions. In the current study, survey fatigue occurred as the number of unanswered questions increased towards the end of the ISAP questionnaire. Also, more of the symptom questions than the function questions were answered. This implies that the results can be misleading.

Furthermore, one could question whether SRAS-R is a suitable questionnaire to compare ISAPs constructs to. SRAS-R has been critiqued, and since the revision of the original version an adapted version has also been developed (Heyne et al., 2017). Also, in the current study the factors Peer relationship problems and Conduct problems in SDQ showed poor internal consistency. Previous research has also shown questionable internal consistency for Peer relationship problems and Conduct problems (Lundh et al., 2008). The critique of SRAS-R and questionable reliability of some of the factors in SDQ could imply that the convergent validity in the current study should be interpreted with caution.

#### **4.4 Conclusion**

The current study was an early contribution to the psychometric testing of ISAP. The results showed that items loaded on the expected factors, the model fit partially reached adequate levels, the internal consistency reached adequate levels, and evidence of convergent validity was found. These findings partly support the structure of ISAP, and largely indicate that ISAP is a valid and reliable measure of school attendance problems in the Finnish, non-clinical population. This comprehensive instrument may be resourceful in identifying early signs of school attendance problems. Further analyses of the psychometric properties are recommended.

## Summary in Swedish – Svensk sammanfattning

### De psykometriska egenskaperna hos den finska versionen av Inventory of School Attendance Problems

Att vara närvarande i skolan är viktigt för barnets akademiska, socio-emotionella och personliga utveckling. Individer som konsekvent varit närvarande i skolan tenderar att leva längre, ha bättre möjligheter i arbetslivet och leva ett mindre kriminellt liv (Carroll, 2010; Gottfried, 2014; Rocque et al., 2017).

Vice versa tenderar problematisk skolfrånvaro att leda till allvarliga konsekvenser. Studier har funnit att det finns ett samband mellan problematisk skolfrånvaro och bland annat sämre akademisk framgång samt ett mindre socialt liv (Carroll, 2010; Credé et al., 2010; Gottfried, 2009, 2014). Man har även funnit samband mellan problematisk skolfrånvaro och negativa livserfarenheter i vuxenlivet, som exempelvis sysselsättningssvårigheter, kriminalitet och generella anpassningssvårigheter i samhället (Rocque et al., 2017).

Gällande bakomliggande orsaker till problematisk skolfrånvaro har associationer gjorts med bland annat mental ohälsa, somatiska problem, mobbning, ensamhet, svårigheter i skolan, problematiska förhållanden till lärare, problematiska familjeförhållanden och mental ohälsa hos föräldrarna (Ingul et al., 2019; Kearney, 2008).

Vid utredning av problematisk skolfrånvaro är det viktigt att beakta dess mångfacetterade natur. Utöver frekvensen och långvarigheten av ett barns frånvaro, bör man ta reda på vilka symtomen som leder till frånvaron samt vad frånvarons funktion är. Dessutom bör man ta hänsyn till att kontextuella faktorer kan bidra till skolfrånvaro. Påfrestningar kan finnas både i hem- och i skolmiljön (Elliott & Place, 2019).

Enligt Gren Landell (2020) bör en utredning vara multidisciplinär. Problematisk skolfrånvaro bör således utredas från ett pedagogiskt, socialt, psykologiskt samt medicinskt perspektiv. De främsta utredningsmetoderna gällande skolfrånvaro är intervjuer, beteendeobservationer samt frågeformulär (Gonzálvez et al., 2021). Det är önskvärt att problematisk skolfrånvaro kan utredas snabbt, enkelt samt interprofessionellt (Gren Landell, 2020). Dessutom är utredningsmetodens validitet och reliabilitet av avgörande betydelse. Frågeformulär har fördelen att vara lättadministrerbara och är relativt lätta att bedöma validiteten och reliabiliteten för.

Det finns ett flertal olika instrument som bedömer problematisk skolfrånvaro. Frågeformuläret Inventory of School Attendance Problems (ISAP) utvecklades i syfte att

upptäcka både symptom som förknippas med problematisk skolfrånvaro och vad frånvarons olika funktioner är (Knollmann et al., 2019). ISAP är även ämnat att upptäcka tidiga tecken på problematisk skolfrånvaro genom att ta i beaktande de elever som upplever symptom men än så länge är närvarande i skolan. Den första analysen av ISAP, som gjordes på ett kliniskt sampel, genererade lovande resultat. Vidare studier av ISAP behövs för att kunna bestyrka frågeformulärets validitet och reliabilitet. Knollmann med kollegor har pålyst behovet av studier på ISAP i icke-kliniska sampel, för att kunna avgöra om instrumentet är användbart för tidig identifiering av problematisk skolfrånvaro. Knollmann och hans kollegor utförde en explorativ faktoranalys då de utvecklade instrumentet, och de efterfrågade uppföljande konfirmatoriska faktoranalyser.

Syftet med denna studie var att utvärdera de psykometriska egenskaperna hos frågeformuläret ISAP i ett finskt, icke-kliniskt sampel. Instrumentets faktorstruktur, interna konsistens samt konvergenta validitet testades. Hypoteserna var att man skulle finna stöd för 13-faktormodellen, att adekvata nivåer av intern konsistens skulle nås, samt att faktorerna hos ISAP skulle korrelera mest med liknande faktorer hos andra instrument.

### **Metod**

Data samlades in genom en webb-enkät i april och maj 2021. Frågebatteriet bestod av tre frågeformulär samt några tilläggsfrågor gällande bakgrundsvariabler och Covid-19. I undersökningen deltog sju skolor där undervisningsspråket var finska. Föräldrarna och ungdomarna informerades om undersökningen på förhand. Eleverna gav sitt samtycke till deltagande i studien då de började fylla i frågeformulären, och för de elever som var yngre än 15 år insamlades dessutom samtycke från föräldrarna. Studien godkändes av den forskningsetiska nämnden vid Åbo Akademi i maj 2020.

Samplet bestod av  $N = 971$  respondenter. Efter att ha exkluderat de som ej gett sitt samtycke, som ej var av den tilltänkta åldern 12–16 år eller som lämnat mer än 30% av ISAP-frågorna obesvarade återstod 451 respondenters svar. Medelåldern var 14,4 ( $SD = 0,94$ ).

ISAP, som utvecklades i Tyskland (Knollmann et al., 2019), har översatts till finska (Tuettua Verkko-Opetusta Erytyistilanteissa, 2020). ISAP består av 13 faktorer som innefattar såväl internaliserad och externaliserad problematik som problem inom familj och skola: 1) depression, 2) social fobi, 3) separationsångest, 4) prestationsångest, 5) agorafobi/panik, 6) somatiska besvär, 7) olust kopplat till skolan, 8) aggression, 9) problem med klasskamrater, 10) problem med lärare, 11) problem med specifik skola, 12) problem inom familjen och 13) problem med föräldrar. Sammanlagt finns det 48 påståenden som alla presenterar ett symptom,



exempelvis ”Före eller i skolan/på skoltid känner jag mig lämnad utanför av andra elever”, samt en funktion, ”Därför är jag borta från skolan eller tycker det är svårt att vara i skolan”.

ISAP jämfördes med frågeformuläret SRAS-R, som består av 24 frågor fördelade på fyra faktorer: 1) undvikande av stimuli som skapar negativ affekt, 2) flykt från sociala situationer och/eller situationer man utvärderas i, 3) erhållande av uppmärksamhet och 4) förstärkande händelser utanför skolan (Kearney, 2002). I denna studie varierade korrelationen mellan skalorna på SRAS-R mellan ,45 och ,78. Cronbachs alfa varierade mellan ,74 och ,89. Den interna konsistensen nådde acceptabel nivå för en av faktorerna och goda nivåer för de tre övriga faktorerna.

Det andra frågeformuläret som ISAP jämfördes med var SDQ, som utvecklats i syfte att fungera som ett screeningverktyg för barns och ungdomars psykiska hälsa (Goodman, 1994). SDQ består av 25 frågor fördelade på fem faktorer: 1) emotionella problem, 2) beteendeproblem, 3) hyperaktivitet/ouppmärksamhet, 4) problem med jämnåriga och 5) prosocialt beteende. I denna studie varierade korrelationerna mellan faktorerna på SDQ mellan -,16 och ,48. Cronbachs alfa varierade mellan ,54 och ,79, vilket innebär att två av faktorerna inte nådde acceptabel nivå av intern konsistens. Faktorerna med dålig intern konsistens var problem med jämnåriga samt beteendeproblem.

### **Resultat**

Vid utvärderingen av de psykometriska egenskaperna hos ISAP analyserades symtomfaktorerna och funktionsfaktorerna skilt. Korrelationen mellan skalorna varierade mellan ,17 och ,72 (Tabell 1 och 2). De standardiserade fråga-till-faktor -laddningarna varierade mellan ,50 och ,92. Frågorna laddade på de förväntade faktorerna (Figur 1 och 2). Modellanpassningsmått för frågeformulärets symtomskala var:  $\chi^2(1002, N = 479) = 1441,30, p < ,01$ ; CFI = ,80; RMSEA = ,03, 90% CI [,027; ,034] och SRMR = ,05. För funktionsskalan var de:  $\chi^2(1002, N = 452) = 1196,56, p < .01$ ; CFI = ,74; RMSEA = ,02, 90% CI [,016; ,025] och SRMR = ,06. Modifikationsindexen analyserades eftersom några av modellanpassningsmått ej nådde adekvata nivåer. Frågorna 21, 2 och 48 på symtomskalan och frågorna 21, 41 och 45 på funktionsskalan laddade på flera faktorer.

Cronbachs alfa varierade mellan ,74 och ,91 för de 26 faktorerna på ISAP. Således var den interna konsistensen utmärkt för två, god för femton och acceptabel för nio av faktorerna (Tabell 3).

Faktorerna på symtomskalan i ISAP visade överlag måttliga till höga korrelationer med faktorerna i SRAS-R och SDQ (Tabell 4). Depression korrelerade högst med

undvikande av stimuli som skapar negativ affekt ( $r = ,72$ ), med flykt från sociala situationer och/eller situationer man utvärderas i ( $r = ,56$ ) samt med emotionella problem ( $r = ,71$ ). Social ångest korrelerade också högt med undvikande av stimuli som skapar negativ affekt ( $r = ,61$ ), med flykt från sociala situationer och/eller situationer man utvärderas i ( $r = ,56$ ) samt med emotionella problem ( $r = ,66$ ). Prestationsångest korrelerade högt med undvikande av stimuli som skapar negativ affekt ( $r = ,63$ ) och med emotionella problem ( $r = ,53$ ). Aggression korrelerade högt med emotionella problem ( $r = ,53$ ), med beteendeproblem ( $r = ,55$ ) samt med hyperaktivitet/ouppmärksamhet ( $r = ,51$ ). Problem med klasskamrater korrelerade högt med emotionella problem ( $r = ,52$ ), med undvikande av stimuli som skapar negativ affekt ( $r = ,50$ ) samt med flykt från sociala situationer och/eller situationer man utvärderas i ( $r = ,51$ ). Faktorerna agorafobi/panik, somatiska besvär, olust kopplat till skolan, problem med lärare, problem med specifik skola samt problem med föräldrar korrelerade lite till måttligt med faktorerna i SRAS-R och SDQ. Faktorerna separationsångest och problem inom familjen korrelerade överlag lägre med faktorerna i SRAS-R och SDQ.

Faktorerna i funktionsskalan i ISAP visade överlag låga till måttliga korrelationer med faktorerna i SRAS-R och SDQ (Tabell 5). Jämfört med symtomskalan var korrelationerna i funktionsskalan lägre. Olust kopplat till skolan, problem med klasskamrater samt problem med lärare korrelerade måttligt med emotionella problem, beteendeproblem, hyperaktivitet/ouppmärksamhet, problem med jämnåriga, undvikande av stimuli som skapar negativ affekt samt flykt från sociala situationer och/eller situationer man utvärderas i. Separationsångest, problem inom familjen samt problem med föräldrar korrelerade lågt med de flesta faktorerna. Depression korrelerade dock högt med undvikande av stimuli som skapar negativ affekt ( $r = ,53$ ) och emotionella problem ( $r = ,50$ ).

### **Diskussion**

Syftet med denna studie var att analysera de psykometriska egenskaperna hos frågeformuläret Inventory of School Attendance Problems genom att testa det i ett finskt, icke-kliniskt sampel. Resultaten visade att frågorna laddade på de förväntade faktorerna. Modellanpassningsmåten förväntades nå adekvata nivåer, men endas två av de fyra måten gjorde det. Den interna konsistensen nådde som förväntat adekvata nivåer. Slutligen förväntades det finnas konvergent validitet mellan skalorna hos ISAP och liknande skalor hos SRAS-R och SDQ, vilket det till stor del visade sig finnas i symtomskalan och delvis i funktionsskalan.

Att modellanpassningsmåten Chi-square och CFI ej nådde adekvata nivåer vare sig för symtomskalan eller funktionsskalan kan förklaras av att denna studie utfördes i en annan

kontext än originalstudien. Modifikationsindexen indikerade att fråga 21, 2 och 48 i symtomskalan samt fråga 21, 41 och 45 i funktionsskalan laddade på flera andra faktorer än depression och olust kopplat till skolan som de tillhör. Detta antyder att dessa frågor är för icke-specifika då de passar in på flera andra problemområden. Eftersom denna studie är utforskande och ett tidigt bidrag i validering av ISAP beslöts det att modellen ej skulle trimmas enligt modifikationsindexen för att ytterligare testas. Den interna konsistensen nådde adekvata nivåer för alla 26 faktorer, vilket ger stöd för reliabiliteten hos ISAP. Detta innebär att de olika frågorna inom samma faktor genererar liknande svar.

Gällande den konvergenta validiteten förväntades de faktorer i ISAP som mäter internaliserad problematik (depression, social ångest, separationsångest, prestationsångest, agorafobi/panik, somatiska besvär) korrelera med faktorerna som mäter internaliserad problematik i SDQ (emotionella problem) och SRAS-R (undvikande av stimuli som skapar negativ affekt samt flykt från sociala situationer och/eller situationer man utvärderas i). Alla dessa faktorer, förutom separationsångest, i både symtom- och funktionsskalan av ISAP korrelerade måttligt till högt med de motsvarande faktorerna i SDQ och SRAS-R. Sammantaget hittades stöd för konvergent validitet gällande faktorerna som mäter internaliserad problematik. Faktorerna som mäter externaliserad problematik i ISAP (olust kopplat till skolan och aggression) förväntades korrelera med de motsvarande faktorerna i SDQ (beteendeproblem och hyperaktivitet/ouppmärksamhet) och SRAS-R (erhållande av uppmärksamhet och förstärkande händelser utanför skolan). I symtomskalan i ISAP hittades låga till höga korrelationer, och i funktionsskalan hittades låga till måttliga korrelationer med de motsvarande faktorerna. Sammantaget hittades delvis stöd för konvergent validitet gällande faktorerna som mäter externaliserad problematik.

En av begränsningarna i denna studie var att frågeformulär ej genererar objektiva svar. Ungdomar kan ha svårt att känna igen symtom, varför man är frånvarande eller hur mycket man har varit frånvarande. En annan begränsning var att fastän några av modellenpassningsmåttan ej nådde adekvata nivåer, så trimmades modellen ej. I kommande analyser av ISAP rekommenderas revidering av vissa av frågorna i faktorerna depression och olust kopplat till skolan. Däremot är denna studie ett tidigt bidrag till valideringen av ISAP. Den ger indikationer på huruvida instrumentet fungerar i den icke-kliniska populationen samt vad som kunde förbättras i modellen.

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