University of Maribor

Faculty of Health Sciences

Doctoral dissertation

Nursing support in facilitating mental well-being of adolescents

Podpora zdravstvene nege pri spodbujanju duševnega blagostanja mladostnikov

January 2022 Leona Cilar Budler

University of Maribor

Faculty of Health Sciences

Doctoral dissertation

Nursing support in facilitating mental well-being of adolescents

Podpora zdravstvene nege pri spodbujanju duševnega blagostanja mladostnikov

Author: Leona Cilar Budler

Supervisor: Prof. Majda Pajnkihar, PhD, RN, FAAN, FEANS

Co-supervisors: Assoc. Prof. Gregor Štiglic, PhD

Prof. Owen Barr, PhD, RN

January 2022 UDC: 616-083:613.86-053.6(043.3)

Author:	Leona Cilar Budler
Title in English:	Nursing support in facilitating mental well-being of adolescents
Title in Slovene:	Podpora zdravstvene nege pri spodbujanju duševnega blagostanja mladostnikov
UDC:	616-083:613.86-053.6(043.3)
Keywords:	youth; mental health; quality of life; social support; nursing
Number of pages:	292
Editing of text and images:	Leona Cilar Budler
Number of copies:	4
Language reviewer:	Jernej Lorber
Place and date:	Maribor, January 2022

Acknowledgment

With all my heart, I thank my family for their patience, encouragement, and immense love.

“And like our physical pain, our psychological pain is not necessarily always bad or even undesirable. In some cases, experiencing emotional or psychological pain can be healthy or necessary. And if you think at any point you’re allowed to stop climbing, I’m afraid you’re missing the point. Because the joy is in the climb itself.”

(Manson, 2016)

Nursing support in facilitating mental well-being of adolescents

Keywords: youth, mental health, quality of life, social support, nursing

Abstract

***Background**: Mental well-being is a state in which an individual acts positively, feels good, copes with the daily stressors and contributes to his/her community. Adolescents are a population who experience the various stressors brought on by growing up. The purpose of the doctoral dissertation is to determine the mental well-being of adolescents in correlation with the support of family, friends, teachers, and nurses.*

***Methods**: The research was based on the paradigm of pragmatism which supports the usage of quantitative and qualitative approaches using mixed methods. The quantitative part of the research included 2 972 adolescents. The survey method was used, descriptive and inferential statistics and presentation of the results were done with the help of tables, charts and figures. In the qualitative part of the research, data were collected using the interview method. Interviews were conducted with 5 focus groups involving 16 adolescents, 8 parents, 6 teachers, 3 legislators, and 6 nurses. The data were analysed following the steps of Corbin & Strauss (2008).*

***Results**: The mental well-being of adolescents is positively related (r = 0.624) to their social support. The mental well-being (r = -0.286) and social support (r = -0.239) of adolescents declines with age. Adolescents are of the opinion that the role of the nurse is to talk to them, help them, advise them, and explain difficulties that bother them. The mental well-being of adolescents is related to their interaction and interpersonal relations with parents, friends, and teachers. In ensuring the mental well-being of adolescents, we must consider the model multidimensional well-being. The Model of Interpersonal Relationships is proposed, which is formed based on the results of quantitative and qualitative part of the research and taking into account the concepts of*

the Theory of Interpersonal Relationships (Peplau, 1952) and the model of Multidimensional Well-being (Sarriera & Bedin, 2017).

***Discussion**: Mental well-being is an important and relatively new concept in nursing. Adolescents' mental well-being is closely linked to interpersonal relationships and a safe environment in which they can express themselves. Adolescents and parents do not obtain the necessary professional help in a timely manner. There is also a need for additional education on the mental well-being of adolescents among adolescents, parents, teachers, and nurses.*

***Conclusion**: Interpersonal relationships between adolescents, family, friends, teachers, and nurses are of major importance for ensuring mental well-being. There is a need for further research to improve the mental well-being of adolescents worldwide.*

Podpora zdravstvene nege pri spodbujanju duševnega blagostanja mladostnikov

Ključne besede: mladi, duševno zdravje, kvaliteta življenja, socialna podpora, zdravstvena nega

Povzetek

***Teoretična izhodišča**: Duševno blagostanje je stanje, v katerem posameznik deluje pozitivno, se počuti dobro, se dobro sooča z vsakodnevnimi stresorji in prispeva svoji skupnosti. Pogosto dobrega duševnega zdravja in dobrega počutja ni možno zagotoviti, kar lahko privede do pojava težav v duševnem zdravju. Posebno ranljiva populacija so mladostniki, ki so zaradi različnih rizičnih obnašanj, kot so poskušanje in uživanje psihoaktivnih substanc, kajenje, rizično seksualno obnašanje in zmanjšana telesna dejavnost, bolj dovzetni za pojav težav v duševnem zdravju in posledično razvoju duševnih motenj. Mladostniki se soočajo z različnimi stresorji, ki jih prinaša odraščanje. Pomembno pa je, da težave v duševnem zdravju zaznamo in odpravimo zgodaj, saj lahko nezdravljene težave v duševnem zdravju v mladostništvu privedejo do razvoja duševnih motenj v odrasli dobi. Podporo duševnemu blagostanju mladostnikov lahko zagotavljajo družina, učitelji, prijatelji ter zdravstveni sistem. Podpora družine in družinskih članov pomembno vplivata na mladostnikovo duševno blagostanje. Študije kažejo, da dobri odnosi s starši in sošolci kažejo na boljše duševno blagostanje mladostnikov. Socialna podpora ima bistveni pomen pri mladostnikih, ki živijo v ranljivih okoljih in so bolj dovzetni za razvoj težav v duševnem zdravju. Podpora duševnemu zdravju je pozitiven pristop in prvi korak k ohranjanju duševnega blagostanja. Zagotavljanje duševnega blagostanja ne vključuje le delovanja zdravstvenega sektorja, temveč tudi drugih sektorjev in politike, saj se duševno zdravje oblikuje v družinah, šolah, javnih krajih in družbah. Izobraževalne ustanove so pomemben dejavnik pri prepoznavanju težav v duševnem zdravju. Posameznik, ki ima duševno motnjo, lahko kljub različnim simptomom in izzivom uspeva normalno funkcionirati. Prav tako pa se lahko oseba, ki*

nima duševnih motenj, sooča z različnimi stresorji in težavami ter jih težko razrešuje. Zato je zelo pomembno, da preprečimo pojav težav v duševnem zdravju in zagotovimo ustrezno podporo mladostnikom s strani družinskih članov, prijateljev, učiteljev in zdravstvenega sistema. Prav tako je izrednega pomena, da ugotovimo, kako na podporo duševnemu blagostanju mladostnikov s strani zdravstvenega sistema gledajo starši. Namen doktorske disertacije je bil ugotoviti stopnjo duševnega blagostanja mladostnikov v povezavi s podporo družine, prijateljev, učiteljev in medicinskih sester.

***Metode**: Raziskava je temeljila na paradigmi pragmatizma, ki podpira stališča kvantitativnih in kvalitativnih pristopov z uporabo mešanih metod. Uporabljen je bil sekvenčni razlagalni pristop, kjer smo na začetku izvedli kvantitativni del raziskave, potem pa kvalitativni del raziskave, ki je razjasnil pridobljene kvantitativne rezultate. S pomočjo mešanih metod smo pridobili vpogled v stanje duševnega blagostnja mladostnikov in podpori duševnemu blagostanju s strani staršev, učiteljev, prijateljev in medicinskih sester in vpogled v mnenje mladostnikov, staršev, učiteljev, medicinskih sester in zakonodajalcev o podpori duševnemu blagostanju mladostnikov. Glavno merilo za vključitev v kvantitativni del raziskave je bil mladostnik, star med 10 in 19 let. Vzorčenje je bilo naključno. Od skupno 6 967 razdeljenih vprašalnikov je bilo izpolnjenih in vrnjenih 2 972, kar predstavlja 42,67-odstotno stopnjo odziva. V raziskavi je sodelovalo 1 489 učencev iz 15 osnovnih šol in 1 483 dijakov iz 10 srednjih šol. Za zbiranje podatkov smo uporabili metodo anketiranja. Rezultate smo analizirali s pomočjo statističnega programa R in z metodami opisne in sklepne statistike. Le-te smo prikazali s pomočjo tabel, grafov in slik. Pri interpretaciji rezultatov smo upoštevali stopnjo statistične značilnosti $\alpha = 0,05$. V kvalitativnem delu raziskave smo s teoretičnim vzorčenjem pridobili širok pogled na duševno blagostanje vseh interesnih skupin. Teoretično vzorčenje se običajno uporablja pri metodi utemeljene teorije za pospeševanje razvoja izbranega teoretičnega raziskovalnega procesa. Fokusne skupine so bile izvedene med šestnajstimi mladostniki (osem osnovnošolcev in osem srednješolcev), osmimi starši, šestimi učitelji, šestimi medicinskimi sestrami in tremi zakonodajalci, ki so privolili v sodelovanje v raziskavi. Raziskavo je vodila Teorija medosebnih odnosov avtorice Peplau (1952). Uporabili smo metodo utemeljene teorije, katere namen je oblikovanje teorije, ki*

sloni na dokazih, saj smo želeli pridobiti nova znanja in ugotovitve s področja duševnega blagostanja mladostnikov. Podatke smo analizirali po korakih avtorjev Corbin & Strauss (2008), jih sintetizirali in prikazali v obliki tabele. Pred izvedbo pilotne raziskave smo pridobili soglasje etične komisije fakultete (št. 038/2019 / 886-2 / 504). Pred izvedbo glavne raziskave (tako kvantitativnega kot kvalitativnega dela) je bila etična odobritev pridobljena tudi s strani Komisije Republike Slovenije za medicinsko etiko (št. 0120-313 / 2019/13). Za vstop v raziskovalno okolje smo pridobili soglasje ravnateljev šol, udeležencev in staršev/skrbnikov. Udeleženci, povabljeni v študijo, so bili ustno in pisno obveščeni o namenu raziskave, navodilih za skladnost, zaupnost, anonimnost in prostovoljstvo ter možnosti odstopa od sodelovanja v kateri koli raziskovalni fazi. Tako učenci, mlajši od 16 let, kot starši so podpisali soglasje. Rezultati so predstavljeni v doktorski disertaciji in člankih ob upoštevanju etičnih načel in načel objavljanja člankov.

***Rezultati**: Slovenski različici lestvice WEMWBS in lestvice KIDSCREEN-27 sta dosegli dobro veljavnost, zanesljivost in psihometrične lastnosti tako v pilotni kot v glavni študiji. Obe lestvici sta bili prevedeni v slovenski jezik in validirani po priporočilih. S pomočjo rezultatov pilotne raziskave ugotavljamo, da sta lestvici uporabni za populacijo mladostnikov v Sloveniji. Tako sta bili v glavni raziskavi uporabljeni obe lestvici. Duševno blagostanje mladostnikov je pozitivno povezano (r = 0,624) z njihovo kakovost življenja in socialno podporo. Srednja vrednost duševnega počutja osnovnošolcev je bila 54,11 (SD = 8,89), srednja vrednost med srednješolci pa 50,38 (SD = 9,11). Duševno blagostanje (r = -0,286) in socialna podpora (r = -0,239) mladostnikov upada s starostjo. Povprečna vrednost socialne podpore osnovnošolcev je 106,04 (SD = 18,07), povpečna vrednost med srednješolci pa nekoliko nižja, in sicer 96,34 (SD = 17,37). Duševno blagotanje mladostnikov se med različnimi regijami prebivališča razlikuje (H(11) = 70,689, p < 0,001). Mladostniki so mnenja, da je vloga medicinske sestre, da se z njimi pogovarja, jim pomaga, svetuje in razlaga. Duševno blagostanje mladostnikov je povezano z njihovo interakcijo in medsebojnimi odnosi s starši, prijatelji in učitelji. Najvišja stopnja duševnega blagostanja je očitna pri mladostnikih, ki živijo v Podravski regiji (M = 54,36; SD = 9-50), najnižja med mladostniki, ki živijo v Koroški regiji (M = 46,82; SD = 12,98). Na podlagi rezultatov fokusnih skupin smo oblikovali glavno kategorijo »Medsebojni odnosi*

mladostnikov« in štiri podkategorije: razumevanje duševnega blagostanja mladostnikov; duševno blagostanje mladostnikov v povezavi z medosebnimi odnosi; dejavniki in ljudje, ki vplivajo na duševno počutje mladostnikov; ter vloga medicinske sestre pri zagotavljanju duševnega blagostanja mladostnikov. Pri osnovnošolcih ima družina največjo vlogo, medtem ko srednješolci menijo, da imajo največjo vlogo prijatelji. Enakega mnenja so bili tudi starši. Poleg tega mladostniki menijo, da ima medicinska sestra pomembno vlogo pri ohranjanju duševnega blagostanja mladostnika, saj je strokovnjakinja na področju promocije zdravja. Izjavili so tudi, da se premalo časa posveča razpravi o duševnem blagostanju. Medicinske sestre so bile istega mnenja. Prav tako so medicinske sestre v šoli dobrodošle, da izvajajo pouk in delavnice za mladostnike, starše in učitelje, kot trdijo učitelji in starši. Učenci in dijaki so poročali, da so odnosi z vrstniki in učitelji zelo pomembni, saj veliko časa preživijo v šoli. Učitelji so izjavili, da se vidijo kot vzor učencem. Pri zagotavljanju duševnega blagostanja mladostnikov moramo upoštevati vse vidike multidimenzijskega blagostanja. Predlagan je Model medsebojnih odnosov, ki je oblikovan na podlagi rezultatov kvantitativnega in kvalitativnega dela raziskave ter z upoštevanjem konceptov Teorije medosebnih odnosov (Peplau, 1952) in modela multidimenzionalnega blagostanja (Sarriera & Bedin, 2017). Kot je razvidno iz rezultatov, medosebni odnosi pomembno vplivajo na mladostnikovo duševno blagostanje. To je v skladu s Teorijo o medosebnih odnosih Peplau (1952), ki je vodila našo raziskavo. Veliko dejavnikov vpliva na duševno blagostanje mladostnikov, kot so na primer kakovost življenja, pozitivna psihologija, pozitivna klima, čustveno počutje, čustvena inteligenca, socialna vključenost, telesna aktivnost in reševanje problemov ter zmanjšanje stresa. Ugotovitve so v skladu z večdimenzionalnim modelom dobrega počutja (Sarriera & Bedin, 2017).

***Diskusija**: Raziskave na področju duševnega blagostanja v zadnjih desetletjih naraščajo po vsem svetu, zato je bistvenega pomena poznavanje pomena duševnega blagostanja. Pri mladostnikih je duševno blagostanje tesno povezano z medosebnimi odnosi in varnim okoljem, v katerem se lahko izrazijo. Mladostniki in starši pogosto ne dobijo potrebne strokovne pomoči pravočasno. Na podlagi rezultatov v kvantitativnem in kvalitativnem delu raziskave predlagamo naslednjo definicijo duševnega blagostanja: »Duševno*

blagostanje je pozitivni koncept, ki opisuje pozitivno stanje posameznika, ko sprejema sebe, lahko deluje v družbi in izkorišča svoje potenciale.« Vidiki, ki predstavljajo duševno blagostanje, so pozitivni odnosi z drugimi, samosprejemanje, kulturno podprte vrednote, razvojna stopnja in pričakovanja. Duševno blagostanje mladostnika lahko dosežemo z medsebojnimi odnosi z drugimi. V raziskavi je bilo dokazano, da je boljša socialna podpora pozitivno povezana z boljšim duševnim blagostanjem mladostnika. Očitno je, da imajo medicinske sestre veliko vlogo pri vzdrževanju duševnega blagostanja mladostnika z medosebnimi odnosi. Ti odnosi naj bodo terapevtski. Terapevtski medosebni odnosi temeljijo na zaupanju, odprtosti, razumevanju, zavedanju razlik, poštenosti, enakosti in spoštovanju. Prav tako obstaja potreba po dodatnem izobraževanju o duševnem blagostanju mladostnikov med mladostniki, starši, učitelji in medicinskimi sestrami. Čeprav je bila teorija medosebnih odnosov (Peplau, 1952) razvita na področju duševnega zdravja, populacije mladostnikov niso temeljito raziskali. Tako obstaja priložnost za razširitev raziskav in vključitev populacije mladostnikov. Mladostniki so mnenja, da imajo na zagotavljanje njihovega duševnega blagostanja velik vpliv družina, prijatelji in vrstniki ter medicinske sestre. Čeprav mladostniki medicinskih sester ne dojemajo kot zelo pomembnih oseb v svojem življenju, menijo, da imajo medicinske sestre veliko strokovnega znanja o duševnem blagostanju. Njihovo mnenje je tudi, da medicinske sestre podpirajo, skrbijo, pomagajo, svetujejo in se pogovarjajo z mladostniki. Sklepamo lahko, da mladostniki podporo medicinskih sester doživljajo kot terapevtsko podporo. Medicinske sestre morajo izvajati individualno oskrbo, ki jo vodi osebni pristop. Po mnenju mladostnikov imajo učitelji in zakonodajalci minimalno vlogo v njihovem življenju. Čeprav izvedena raziskava prinaša veliko novega znanja na področju duševnega blagostanja mladostnikov, pa je treba upoštevati nekaj omejitev raziskave. Izvedena raziskava je presečna raziskava, ki onemogoča določitev vzročne zveze med pojavi. Študije mešanih metod so večinoma zasnovane kot presečne raziskave, saj je njihov namen z različnimi metodami pridobiti drugačen pogled na raziskovani pojav. Za ugotavljanje vsebinske veljavnosti vprašalnikov WEMWBS in KIDSCREEN-27 je bila uporabljena samo ena ponovitev, priporočljivi pa sta dve ponovitvi ocene ustreznosti vsebine s strani strokovnjakov. Nekateri udeleženci so od raziskave

odstopili, zato so bile k sodelovanju v raziskavi povabljene nove naključno izbrane šole. Kot smo domnevali, se je fokusna skupina zakonodajalcev slabo odzivala. WEMWBS je vprašalnik o duševnem blagostanju, ki ga udeleženci sami izpolnijo glede na duševno blagostanje v zadnjih dveh tednih. KIDSCREEN-27 je prav tako vprašalnik, kjer udeleženci sami poročajo o socialni podpori, kar pomeni, da lahko udeleženci dajo družbeno zaželene odgovore. Zato je treba ugotovitve razlagati previdno.

***Zaključek**: Temeljna ugotovitev te študije je, da je duševno blagostanje mladostnikov povezano s podporo negovalnega in socialnega okolja, dojemanje tega pa se med mladostniki, starši, učitelji, prijatelji, medicinskimi sestrami in zakonodajalci razlikuje. Duševno blagostanje mladostnikov se razlikuje med osnovnošolci in srednješolci. Duševno blagostanje je pri osnovnošolcih boljše kot pri srednješolcih. Poleg tega socialna podpora upada s starostjo učencev oziroma dijakov. Najpomembnejše osebe pri osnovnošolcih so družinski člani in za srednješolce prijatelji. Dobri medosebni odnosi temeljijo na zaupanju, podpori, medsebojnem spoštovanju, odprtosti, poštenosti, zavedanju razlik, komunikaciji, razumevanju in enakosti. Podpora družinskih članov je pomembna, saj so mladostnikom starši vzorniki. Vendar mladostniki mislijo, da pogosto od njih pričakujejo veliko. Pri razvijanju dobrih medsebojnih odnosov med družinskimi člani in mladostnikom je pomembno, da komunicirajo, si posvečajo čas in se razumejo. V odnosih s prijatelji mladostniki pričakujejo, da ti odnosi temeljijo na medsebojnem spoštovanju in zaupanju. Mladostniki menijo, da ima medicinska sestra pomembno vlogo pri ohranjanju duševnega počutja mladostnika, saj je strokovnjakinja na področju promocije zdravja. Kljub temu je premalo časa namenjenega razpravi o duševnem počutju. Vloga medicinskih sester je, da se pogovarjajo z mladostniki, jim pomagajo in skrbijo zanje. Medicinske sestre bi lahko imele pomembno vlogo pri podpori mladostnikom, ko imajo potrebne priprave, podporo in zahtevano zavezanost k partnerstvu. Medicinske sestre imajo pomembno vlogo tudi v šoli, kjer izvajajo seminarje in delavnice za mladostnike, starše in učitelje. Učitelji in medicinske sestre se strinjajo, da je vzgoja ključnega pomena pri oblikovanju osebnosti mladostnika. Učitelji so še dodali, da se vidijo kot vzor. Da bi zagotovili duševno blagostanje mladostnikov, je pomembno, da upoštevamo vse dejavnike, ki bi lahko vplivali na duševno počutje*

mladostnikov, in da vključimo pomembne osebe v medosebnih odnosih. Medosebni odnosi med mladostniki, družino, prijatelji, učitelji in medicinskimi sestrami so izrednega pomena za zagotavljanje duševnega blagostanja. Rezultati doktorske disertacije bodo prispevali k razvoju znanja na področju duševnega blagostanja mladostnikov, saj smo predstavili znanstvene dokaze o povezavi med podporo družine, prijateljev, učiteljev in medicinskih sester ter duševnim počutjem mladostnikov. Obstaja veliko možnosti za nadaljnje raziskovanje z namenom izboljšanja duševnega blagostanja mladostnikov po vsem svetu.

Table of contents

Table of figures

Table of tables

Symbols and abbreviations used

ACT – Acceptance and commitment therapy

APA – American Psychological Association

CBT – Cognitive behaviour therapy

CDC – Centers for Disease Control & Prevention

CFA – Confirmatory Factor Analysis

CFI – Comparative fit index

CINAHL – Cumulative Index to Nursing and Allied Health Literature

CVI – Content validity index

DGBL – Digital Game-Based Learning Program

DTM – Document term matrix

ECG – Electrocardiogram

ENOC – European Network of Ombudspersons for Children

EQLS – European Quality of Life Survey

EU – European Union

GDP – Gross domestic product

GRADE – The Grading of Recommendations Assessment, Development and Evaluation

GMT – Group music therapy

GTM – Grounded theory method

H – Homogeneity level index

HBSC – Health Behaviour in School-Aged Children

IRM – Item response theory

IS – Intervention school

I-CVI – Item content validity index

k – Kappa designating agreement on relevance

LDA – Linear Dirichlet Allocation

M – Mean value

MSA – Mokken scale analysis

NIJZ – Nacionalni inštitut za javno zdravje (Eng. National Institute of Public Health)

NIS – non-intervention school

OECD – Organisation for Economic Co-operation and Development

p-value – statistical significance value

PBM – The Principle Based Model

PEP – the Positief Educatief Programma (Eng. Positive Education Programme)

PIR – the Peer Interpersonal Relatedness

PPI – positive psychology intervention

PRISMA – Preferred reporting items for systematic reviews and meta-analyses

PROSPERO – International Prospective Register of Systematic Reviews

QoL – Quality of Life

RAP – the Resourceful Adolescent Program

RCN – Royal College of Nursing

RMSEA – Root mean square error of approximation

RN – Registered nurse

RNPZD – Resolucija o nacionalnem programu duševnega zdravja (Eng. Resolution on the National Mental Health Program)

RQ – Research question

S4HM – Swith-off 4 Healthy Minds

SD – Standard deviation

SEAL – Social and emotional aspects of learning

SET – Social and Emotional Training

SFRY – Socialist Federal Republic of Yugoslavia

S-CVI – Scale content validity index

TLI – Tucker-Lewis Index

UK – United Kingdom

US – United States

ZDZdr – Zakon o duševnem zdravju (Eng. Mental Health Act)

ZVOP-1 – Zakon o varstvu osebnih podatkov (Eng. Law on Protection of Personal Data)

ZZZS – Zavod za zdravstveno zavarovanje Republike Slovenije (Eng. Health Insurance Institute of the Republic of Slovenia)

WEMWBS – The Warwick-Edinburgh Mental Health Scale

WHO – World Health Organization

WISE – The Wellbeing in Secondary Education

WMA – World Medical Association

1 Problem statement

Mental health is a state of well-being in which the individual realizes his or her own abilities and can cope with everyday stressors (World Health Organization [WHO], 2014a). It is an important component of an individual's life as it represents the ability to understand and perceive the environment and to communicate with each other (Hvala, et al., 2012). Mental well-being is a state of positive psychological and emotional health (MacKean, 2011). There is no universal definition of mental well-being, as this depends on the socio-cultural context of each individual. Elements of children's mental well-being are social intelligence, emotional intelligence and positive functioning. In adolescents, however, these are emotional intelligence, social intelligence, self-esteem, and a positive action (Isnis Isa, 2013). Particularly vulnerable groups are children, adolescents and older people who, due to their developmental differences, require specific treatment (Ministry of Health of the Republic of Slovenia, 2017).

Adolescents' health can be affected by many factors, such as personal, interpersonal, community, organizational, environmental, structural, and macro-factors. Besides, interpersonal factors, which include relationships with friends, peers, teachers, and others with whom adolescents interact, have a large impact (WHO, 2014b). As early as 1995, Smith emphasized that interactions with the nurse, family physicians, and legislators were also important for maintaining adolescent health. The nurse is involved in health promotion and disease prevention and conducts comprehensive medical treatment of the adolescent and his family. Health, however, is not only physical well-being but also social and mental balance (WHO, 1946). In the field of work of school counselling services, there is evident work overload, so nursing support for the mental well-being of adolescents shows great potential, meaning that nurses could be introduced in schools to provide mental health promotion and prevention of mental disorders among adolescents (Ministry of Health of the Republic of Slovenia, 2017).

Adolescents represent a vulnerable population primarily because they are exposed to various risky behaviours such as psychoactive substance use, smoking, risky sexual behaviour, and reduced physical activity; consequently, they are more susceptible to mental health problems (Salam, et al., 2016). Adolescents are exposed to risky behaviours more than adults because they are developing as individuals. They often do things just to fit into society and to accomplish expectations. The WHO (2017) points out that already half of the mental health problems occur in adolescents by the age of 14 . In Slovenia, in the period from 2008 to 2015, the number of visits due to mental disorders increased by 26.0% at the primary care level and 70.0% at the secondary care level. Adolescents between the ages of 15 and 19 were most treated for severe stress response, adjustment disorders, anxiety disorders, depression, and eating disorders (Ministry of Health of the Republic of Slovenia, 2017). Although research shows that the incidence of mental health problems among adolescents is on the rise, very few seek professional help. Research shows that 82.0% of students who have significant mental health problems do not seek professional help (Mariu, et al., 2012). A possible reason for this is the still present stigma about mental disorders and insufficient knowledge about mental health and mental well-being in society (Heary, et al., 2017; Ministry of Health of the Republic of Slovenia, 2017). Radez, et al. (2020) found that adolescents do not seek help because of limited mental health knowledge and broader perceptions of help-seeking, perceived social stigma, embarrassment, financial costs associated with mental health services, and the availability of professional help. Kozel (2007) pointed out that although Slovenia has a high level of depression among adolescents, a systematic approach has still not been developed that would enable the early detection of depressive disorders in adolescents. Therefore, the promotion of mental health is particularly important to increase endurance and protective factors of health and well-being as well as reduce risk factors for disease development (Hoyer, 2005).

Supporting mental health is a positive approach and a first step towards maintaining mental well-being. Ensuring mental health does not include only the operation of the health sector, but also other sectors and policies, as mental health is also formed in families, schools, and public places (Ministry of Health of the Republic of Slovenia, 2017).

Educational institutions are an important factor in identifying mental health problems. Countries abroad, such as UK, invest in educational institutions in order to provide adequate support for the mental health and mental well-being of all children as well as to identify mental health problems and take appropriate action (Department of Health & Department for Education, 2017). Studies show that adolescent's good interpersonal relation with parents and classmates are correlated with the better mental well-being of adolescents (Žukauskienė, 2014). Bokhorst, et al. found in a 2010 survey that the levels of support from family and friends by adolescents were rated the same. Teacher support was lower among older students, which is explained by the transition from primary to secondary education. Also, female students gain more support from teachers, classmates, and friends than male students. Abroad (for example in the USA and the UK), the school nurse has been involved in the education system for many years, where the nurse promotes and takes preventative measure for the health of children and adolescents. Although research shows inconsistency in the training of school nurses in the field of mental health, school nurses who have completed training report positive outcomes in service delivery and quality of care (Ravenna & Cleaver, 2016). Nurses and Midwives Association of Slovenia (2014) proposes the introduction of a school nurse in Slovenia, as teachers and other professionals today face many problems for which they are not suitably qualified. The school nurse would have appropriate knowledge in the field of public health, health promotion, health education, didactics of health education, and other relevant areas.

Alongside the promotion of mental well-being, it is important to detect and treat mental health problems early, as untreated mental health problems in adolescence can lead to the development of mental disorders in adulthood. Therefore, many countries of the European Union are focusing on effective activities to prevent the development of suppressed disorders in adolescents. Much attention is also shifted to the interdisciplinary treatment of children and adolescents (Ministry of Health of the Republic of Slovenia, 2017). An adolescent who has a mental disorder can function normally despite a variety of symptoms and challenges. However, many adolescents can develop mental health problems when not managing to deal with stress. Mental health

problems can influence an individual's well-being and overall health and quality of later life. Moreover, one's mental health problems can influence family members, friends, peers, teachers, and all people with whom an individual is interacting. It is therefore very important that we provide adequate support to adolescents by family members, friends, teachers, and nurses to maintain mental well-being and reduce mental health problems.

To be able to understand the current state of adolescents' mental well-being in Slovenia, there is a need for clarification of the healthcare system and mental health policy in Slovenia. Those are described in the following subchapters.

1.1 The policy of mental health and well-being of adolescents in Slovenia

The mental health policies can take the form of national programs, guidelines, recommendations, and constitute the framework of public mental health policy. These policies are usually aimed at mental health promotion, prevention of mental health problems, care, and integration (European Network of Ombudspersons for Children [ENOC], 2018). In the following chapters, healthcare systems definitions are given and the healthcare system in Slovenia is described.

1.1.1 Healthcare system

The healthcare system is an association consisting of organizations, institutions, and resources dedicated to the implementation of health measures (WHO, 2000). Due to increasing needs and costs, the introduction of new technologies, the burden of chronic non-communicable diseases, and an ageing population, there is a continuing need for change and restructuring of the healthcare system in Slovenia (Cylus, 2015).

Since 1992, after Slovenia declared independence, the Bismarck Health System is in use. The system is based on the 110-year Austro-Hungarian tradition. At that time, new legislation in the field of healthcare was also adopted which included the Healthcare and Health Insurance Act (Slo. Zakon o zdravstvenem varstvu in zdravstvenem zavarovanju) and the Health Services Act (Slo. Zakon o zdravstveni dejavnosti). This system is based on only one provider of basic health insurance – the Health Insurance Institute of the

Republic of Slovenia (Slo. Zavod za zdravstveno zavarovanje Republike Slovenije [ZZZS]) (Albreht, et al., 2016, p. 16).

The Ministry of Health of the Republic of Slovenia controls the system, which is decentralized through numerous tasks. The system of financing the healthcare system in Slovenia has come from the Parliament, the Government, the Ministry of Health, and further through the Health Council of the Extended Professional College. Article 50 of the Constitution of the Republic of Slovenia defines health care as a right within the framework of the right to social security and determines the state as responsible for ensuring this right. Article 51 of the Constitution enshrines the universal right to health care within the framework of statutory provisions, the statutory determination of the right to health care from public funds and the general prohibition of compulsory treatment in the absence of contrary statutory provisions. Article 55 of the Constitution establishes free decision-making on the birth of children. Article 72 of the Constitution enshrines the right to a healthy living environment which the state is obliged to ensure (Constitution of the Republic of Slovenia).

To obtain a clear picture of how the health care system in Slovenia works, the financial system is briefly explained below. Depending on the level of healthcare (primary, secondary, and tertiary), financial resources are divided. The primary level covers population health education, disease prevention, and health promotion. Secondary level healthcare is provided by specialist doctors (for example surgeons, internal medicine specialists, gynaecologists, psychiatrists). Secondary level health activities are usually performed in general hospitals (Donev, et al., 2013). For tertiary healthcare, individuals must be referred by a primary care physician. Tertiary healthcare includes highly specialized services that may be offered in specialized institutions such as university hospitals or clinics (Albreht, et al., 2016; Donev, et al., 2013).

Modern health systems are divided according to the method of payment or financing of healthcare systems. Thus, to be able to understand how the healthcare system in Slovenia is working, financing of the Slovenian healthcare system is presented in Figure 1.1.

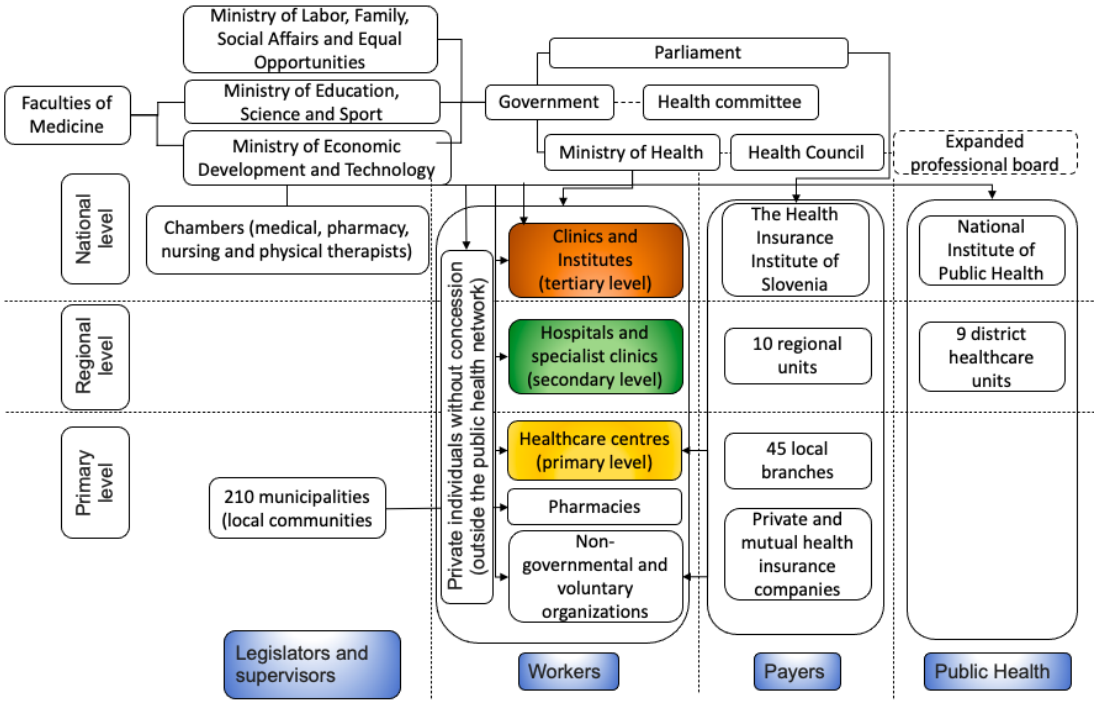


Figure 1.1: The system of financing of the healthcare system in Slovenia (Albreht, et al., 2016, p. 70)

The ZZZS mainly covers the tertiary level, the regional unit at the secondary, and the local units at the primary level. Private insurance companies and the service users themselves pay the additional costs at all levels. The Bismarck system works by insurance companies (which are not part of the state budget) contracting with healthcare providers who have a direct relationship with service users. Compulsory health insurance is ensured by the Health Insurance Institute of the Republic of Slovenia, while supplementary health insurance is provided by various insurance companies with which the state concludes contracts. Compulsory health insurance covers the costs of the healthcare system, medicines, and emergency medical care, as well as absenteeism. Supplementary health insurance co-finances additional payments for medicines and healthcare, as well as activities not previously listed (e.g., aesthetics) (Popovič, 2013; National Institute of Public Health (Slo. Nacionalni inštitut za javno zdravje [NIJZ]), 2016). Additional health insurance, which covers items such as examinations by specialists, physiotherapy, ultrasounds, X-rays, ECGs, is provided by insurance companies.

In 2010, Slovenia allocated 9.0% of its gross domestic product (GDP) (€ 3.2 billion) to healthcare and ranked in the bottom quarter of European countries in terms of the volume (GDP) of funds intended for healthcare. On the other hand, expenditures in 2015 were high compared to other newer Organisation for Economic Co-operation and Development [OECD] members (OECD, 2017). In 2019, Slovenia spent 8.3%of its GDP on healthcare (Elflein, 2020). Expenditure on health is projected to increase from 0.5 to 2.6% of GDP between 2010 and 2060. Expenditure on long-term care, however, is likely to increase from 1.4% of GDP in 2010 to 2.8–5.6% of GDP in 2060. In response, the Ministry of Health concluded an agreement with the European Office of the WHO and the European Observatory for Monitoring Health Systems and Policies to carry out the Health System Analysis in Slovenia project in cooperation with Slovenian experts (Ministry of Health of the Republic of Slovenia, 2016).

The Healthcare system includes activities on the primary, secondary, and tertiary level, and activities for people of all ages. In the following chapter, the healthcare of adolescents is described.

1.1.2 Healthcare of adolescents

The WHO (2014a) defined adolescents as people between 10 and 19 years old. The provision of healthcare for adolescents in Slovenia is defined in the *Guidelines for the implementation of preventive healthcare at the primary level* (Slo. Pravilnik za izvajanje preventivnega zdravstvenega varstva na primarni ravni) (Pucelj, et al., 2016). Registered nurses (RNs) perform regular systematic preventive examinations for adolescents at certain ages. The main purpose of systematic preventive examinations is to know the health status of adolescents, to actively monitor, detect health problems, and to advise parents or guardians and adolescents. It covers the assessment of physical growth and development, the determination of physical and mental health, measures to maintain and promote health and enable optimal physical and mental development, as well as the detection of negative social factors and unhealthy lifestyle habits in the family (*Guidelines for the implementation of preventive healthcare at the primary level*). Systematic examinations of children and adolescents are performed from birth to the

age of 19, according to the current topic (*Guidelines for the implementation of preventive healthcare at the primary level*; Pucelj, et al., 2016). A timetable of systematic and purposeful examinations is presented in table 1.1. The table was created based on the *Guidelines for the implementation of preventive healthcare at the primary level*.

Systematic health visits are performed already in new-borns to conduct preventive examinations, monitor the state of health and, if necessary, to monitor the new-born in the neonatal clinic. Compulsory preventive health measures and vaccinations and other necessary preventive measures are performed in this stage. Both, systematic and purposeful health visits are performed in compliance with the *Guidelines for the implementation of preventive healthcare at the primary level* in new-borns, 1-, 2-, 3-, 6-, 9-, 12- 18- months old and 3-, 5- and 6-year-old children. Furthermore, health visits are performed before a child enters school as well as in the 1st, and 3rd grade of primary school. In table 1.1, systematic health visits and purposeful examinations for adolescents are described in detail.

Table 1.1: Review of systematic health visits and purposeful examinations of adolescents

Age	Systematic health visits	Purposeful examination	Subject
6th year in primary school	Review of medical records, parental notices and surveys; personal history; family history: supplement; social history: supplement; somatic status: screening tests; other somatic status according to indications; completion of the review. Conducting the survey in small groups with an individual interview: well-being at school, family, among peers, life habits, possible stress, stress and depression, drug abuse, risky lifestyle, school success and absenteeism. Group health education in two groups. Interview with the class teacher about the group and the individual.	Systematic examinations of young people outside regular schooling at the age of 18: review of health documentation. personal and family history. social history.	Growing up (**mental** and physical changes during adolescence)
8th year in primary school	Review of medical records, parental notices and surveys; personal history; family history: supplement; social history: supplement; somatic status: screening tests; other somatic status according to indications; completion of the review. Surveying small groups. Group health education in two groups. Interview with the class teacher about the group and the individual.	somatic status: screening tests; others. Individual (group) health education and survey implementation.	Movement
3rd year in secondary school	Review of medical records, parental notices; personal history; family history: supplement. Social history: supplement; somatic status: screening tests; other somatic status according to indications. Conclusion review. Conducting a survey in small groups. Group health education in two groups. Interview with the class teacher about the problems of the group and the individual.		Sexuality; Influence of substances on the body

As evident from the table, adolescents receive systematic health visits in the 6th and 8th year of primary school, and in the 3rd year in secondary school. Purposeful examinations are performed if there are any deviations perceived during systematic health visits. Also, RNs perform individual, and group talks about different subject. One of them is student mental health.

The *Guidelines for the implementation of preventive healthcare at the primary level* set out guidelines for adolescent health education, which include the following areas:

- awareness of healthy and safe sex and gender relations, promotion of healthy physical, mental, and social development, rejection of forced sex and sexual violence,
- awareness of risk factors,
- awareness of the principles of family planning,
- accessibility to educational materials,
- motivation and the correct choice of contraceptive methods and devices, considering the advantages and disadvantages of individual methods and devices, demonstration of devices, awareness of the availability of contraception, presentation of factors that affect the persistence of contraception,
- orientation to prevent health problems that are more common in adolescent populations.

Although there are guidelines about preventive activities, there is no special attention given to mental health and well-being promotion or mental health disorders prevention. Given actions are not enough to serve the needs of adolescents. Effective activities could be focused on supporting their development of positive mental health and well-being. In the following chapter policies that focus on mental health are reviewed.

1.1.3 Mental health policy

WHO (2013) pointed out that health systems among the Member States have not adequately responded to the rising burden of mental health disorders. Moreover, many people do not receive appropriate treatment or receive poor quality of care. There is

also an insufficient number of specialized and general health workers dealing with mental health disorders.

Fundamental documents that guide healthcare workers in the field of mental health in Slovenia are *the Mental Health Act* (Slo. *Zakon o duševnem zdravju — ZDZdr*) and the *Resolution on the National Mental Health Program 2018—2028* (Slo. *Resolucija o nacionalnem programu duševnega zdravja 2018—2028 — RNPZD*). *ZDZdr* defines the system of health and social care in the field of mental health, the institutions or holders of this activity, and the rights of the person during treatment in a ward under special supervision of a psychiatric hospital, treatment in a protected ward of a social welfare institution and supervised treatment. It came into force in Slovenia in 2008. The *RNPZD* takes into account previous draft resolutions, as well as all documents in the field of mental health, which were prepared by the WHO, the Council of Europe, and the EU, as well as other documents (Ministry of Health of the Republic of Slovenia, 2017):

- The European Declaration and Action Plan on Mental Health in Europe (2005),
- Green Paper on improving the mental health of the population — Towards a strategy in the field of mental health for the European Union (2005),
- European Pact for Mental Health and Wellbeing (2008),
- Resolution on Mental Health (2009),
- Action Plan for Mental Health 2013 – 2020,
- European Mental Health Action Plan (WHO, 2013 — 2020),
- European Framework Plan for Mental Health and Wellness (2013),
- UN Convention on the Rights of Persons with Disabilities (The Constitutional Court of the Republic of Slovenia first referred to the Convention in 2008 in case U-I-146/07),
- UN Convention on the Rights of the Child (Adopted by the United Nations General Assembly on 20 November 1989 by Resolution no. 44/25, published in the Official Gazette of the Socialist Federal Republic of Yugoslavia — SFRY — International Treaty no. 15/90).

Listed documents focus on the mental health of the general population, less emphasis is given to adolescents' mental well-being. The European Mental Health Action Plan

focuses on effective actions to strengthen mental health and well-being. In this document, the WHO emphasizes the importance of United Nations instruments, particularly the *Convention on the Rights of Child*. The *Convention on the Rights of the Child* is the first international legally binding instrument on respect for and protection of the rights of the child. The document, which emphasizes that children are personalities with all human rights, covers the widest range of human rights, including civil, cultural, economic, political and social rights. Based on the Convention, many governments and countries took several measures that have a long-term impact on improving the situation of children in the world and have contributed to a better quality of life for children.

The first Mental Health Centres in Slovenia started operating in 2019. The purpose of the centres is to increase the availability of comprehensive professional help for all people. Mental health centres are still in the process of opening due to a shortage of paediatric psychiatrists and clinical psychologists. According to the NIJZ (2020) there are already 10 mental health centres for children and adolescents across Slovenia (Brezovica, Celje, Murska Sobota, Nova Gorica, Ormož, Postojna, Ptuj, Ravne na Koroškem, Trbovlje, Velenje) and 10 adult mental health centres (Celje, Kočevje, Murska Sobota, Nova Gorica, Ormož, Ptuj, Ravne na Koroškem, Sevnica, Trbovlje, Velenje), and by the end of 2028 a total of 51 mental health centres are planned to be open, in which interdisciplinary teams of experts will be working. The aim of mental health centres is two-fold. First, to guarantee equal access to services and programs for various cohorts of individuals in their communities. Second, to facilitate connections among stakeholders who offer a range of services in the local environment. By doing so, mental health centres aim at accounting for both – the needs of an individual and the community in providing optimal early-stage interdisciplinary and interdepartmental treatment (NIJZ, 2020). Although mental health centres in Slovenia have already started their work, there is a need for further education in the field of mental health nursing.

1.1.4 Prevention of mental disorders and promotion of mental well-being

The key factors in protecting adolescent's mental well-being are supportive parenting, secure home life, and a positive school environment (Wille, et al., 2008). Moreover, multi-sectoral policies and strategies are needed. Those should include social, financial, and legal protection, health promotion, prevention of injury and risk factors, and healthcare (WHO, 2018).

Preventive interventions in Slovenia include various examinations at different ages as described in the previous chapter. Children of mandatory school age and adolescents under the age of 19 are entitled to a preventive examination by a school medicine specialist before entering school in primary school in grades 1, 3, 6, and 8, and in secondary school in grades 1 and 3 (Ministry of Health of the Republic of Slovenia, 2010).

Prevention of mental disorders in Slovenia occurs on four levels (Figure 1.2), namely (Svab & Zaletel-Kragelj, 2000, pp. 64—66):

- primordial level of prevention — activities focused on the whole population and operating using non-specific measures,
- primary level — prevention of mental disorders in vulnerable populations (adolescents, pregnant women, employees, disabled people, older people),
- secondary level — early detection of mental disorders and early measures to reduce the risk of chronic illness, disability or suicide,
- tertiary level of prevention — treatment and care for people with clinical mental disorders (Figure 1.2).

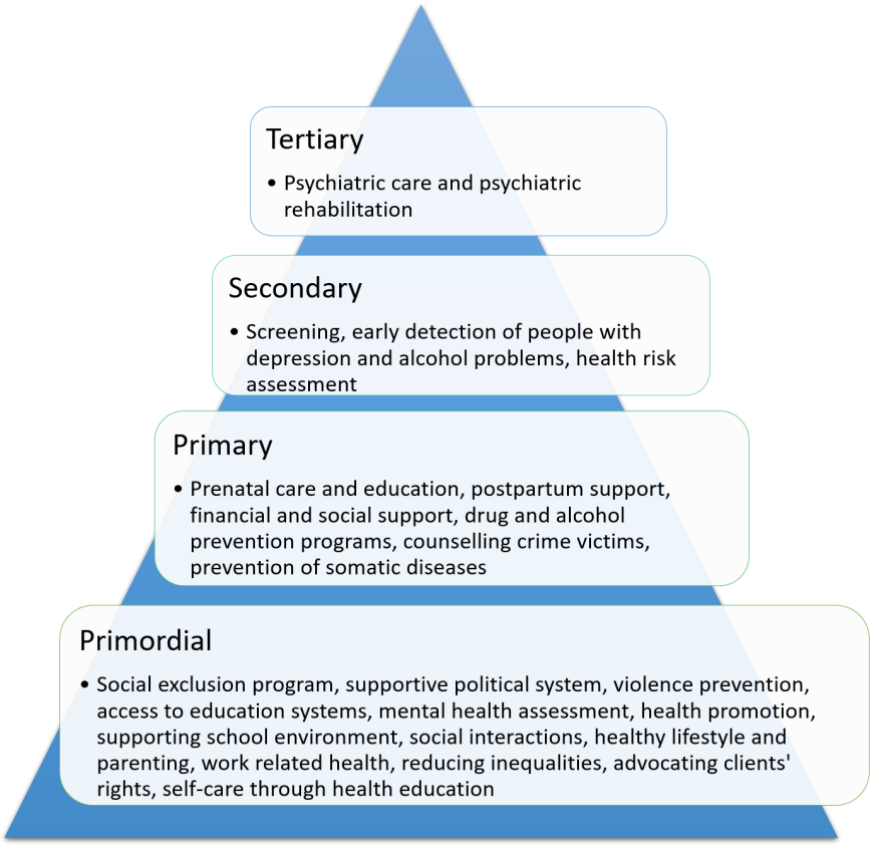


Figure 1.2: Levels of preventing mental disorders (Svab & Zaletel-Kragelj, 2000)

Research shows that in Slovenia and countries such as Cyprus and Greece, support for mental health issues of young people is not well addressed (Ludwinek, et al., 2019). Moreover, young people report that they would not consider turning to support services when having mental health problems. 30.0% of young people across Europe stated that they would find it difficult or very difficult to pay for psychological or psychiatric services. Greece, Cyprus, and Slovenia are countries with difficulties in affording psychological or psychiatric services reported by Eurofound's European Quality of Life Survey — EQLS in 2016 (Ludwinek, et al., 2019). This is due to the fact that the current health system is based on the conceptual and legal framework developed by 1992. There have been attempts to introduce major reforms since 2003. Successful reforms include changes in legislation to restrict the use of alcohol, ban smoking in public places, regulate complementary and alternative medicine, restructure mental health services, and consolidate patient rights (Albreht, et al., 2016, p. 151). In the future, experts and researchers will do their best to improve the healthcare system in Slovenia.

To improve the healthcare of adolescents and ensure their mental well-being, it is important that concepts are appropriately defined and understood. In the following chapter concepts of mental health and mental well-being are described.

1.2 Mental health and mental well-being

A clear definition of mental health is needed to understand what the absence of health means and when the individual needs mental health support (Felton, et al., 2018). There are several various definitions of mental health, thus few will be taken into account when clarifying the meaning of this concept. The WHO (2003, p. 7) defined mental health as "a state of well-being whereby individuals recognize their abilities, can cope with everyday stress, work productively and fruitfully, and make a contribution to their communities." Concepts of mental health are the following: ability to realize intellectual and emotional potential, autonomy, competence, perceived self-efficacy, intergenerational dependence, and subjective well-being (WHO, 2003). The components within this definition have been defined as follows: subjective well-being includes a person's thoughts and feelings about their overall state of being autonomy relates to a person's capacity to separate their identity from other significant persons; perceived self-efficacy is the perception about value and worth; enhancing competencies in relation to enabling individuals to achieve their self-determined goals (Srivastava, 2011). It is a perception of one's capacity to perform a function effectively using specific skills and knowledge and thus achieving desired results at a given time. Intergenerational dependence refers to the relationships between individuals who belong to two different generations. Recognition of the ability to realize the intellectual and emotional potential is closely related to Maslow's hierarchy of needs (Johnson, et al., 2018). Meaning, once a person fulfils his/her physiological needs, security and safety needs, emotional and social needs, and self-esteem needs, he/she must fulfil the need for self-actualization (McLeod, 2018). Mental health refers also to coping with crises without assistance beyond the support from family or friends and maintaining a state of well-being by enjoying life and friends (Shives, 2012). MIND, a UK mental health charity (2011) have defined mental health as "a state when individual care about and for himself/herself."

Mental health is closely related to mental well-being (often named psychological or emotional well-being), which is defined as a dynamic process where individual circumstances, which are in interaction with psychological capabilities, meet the psychological needs and cause positive emotions (MacKean, 2011). US National Institute for Health (2019) states that mental health includes emotional, psychological, and social well-being. The Government Office for Science in the UK (2008, p. 10) defined mental well-being as "a state, in which the individual can develop his/her potential, work productively and creatively, build strong and positive relationships with others, and contribute to his/her community". It has been argued that mental well-being includes three concepts: satisfaction with life, hedonic well-being (positive and negative emotions), and eudemonic well-being (meaning in life) (Cresswell-Smith, et al., 2019; Dolan & Metcalfe, 2012; Smith & Reid, 2018). Stewart-Brown & Janmohamed (2008) state that mental well-being is covering two perspectives: the hedonic perspective which is the subjective experience of happiness (affect) and life satisfaction, and the eudemonic perspective which includes positive psychological functioning, good relationships with others, and self-realization. Definitions of well-being often include concepts such as happiness, human functioning, life satisfaction, mental capital, positive mental health, quality of life, and social capital (Linton, et al., 2016; Salvador-Carulla, et al., 2014).

Mental well-being has been discussed in line with resilience, positive psychology, and salutogenic perspectives (supports descriptions of how people stay well when encountering periods of stress) (Cresswell-Smith, et al., 2019). Personal well-being is a dimension that shows how satisfied a person is with his/her life, the sense of worthwhileness of what a person does in his/her life, emotional experiences, and wider mental well-being (Bache, 2020). Earlier definitions have a narrow focus and often do not include all important concepts. Thus, Sarriera & Bedin (2017, pp. 10-16) proposed a multidimensional approach to well-being that combine different aspects of well-being: psychological well-being (self-concept, life purpose, spirituality), subjective well-being (positive effects, negative effects, life satisfaction, emotional intelligence), socio-community well-being (human rights, sense of community, environment satisfaction)

and psychosocial well-being (interpersonal relationship, leisure, technology use). Multidimensional well-being integrates different concepts, aspects, and perceptions, and gives a unique holistic person-centred approach (Cresswell-Smith, et al., 2019). Adolescents are a specific population often affected by various positive and negative effects that could cause poor mental well-being. The sense of community and interpersonal relations with others may have a protective role in the prevention of mental health difficulties. Thus, concepts of multidimensional well-being are presented through this dissertation in correlation with the concepts of interpersonal relations proposed by Peplau (1952). The definition of multidimensional well-being proposed by Sarriera & Bedin (2017) was used in this thesis, because it covers all concepts of adolescents' well-being, including their mental well-being.

The following chapter discusses the period of adolescence and adolescents needs.

1.3 The period of adolescence

As for mental health and mental well-being, there are also different definitions of the period of adolescence available. In the following text, the definition of the WHO was used to set the age range of the adolescents and other definitions to explain and describe characteristics of the period of adolescence. The WHO (2014a) defined adolescents as people between 10 and 19 years old. The Adolescent Health Committee (2003) stated that adolescence begins with the onset of puberty and ends when an adult identity and behaviour are accepted. The former relates to the onset of menstruation in girls and seminal emissions in boys. These changes appear usually between the ages of 11 and 13 in girls and between 13 and 17 in boys (Barker, 2006). Adolescence is defined in The Merriam-Webster Dictionary (n.d.) as a period of life when a child develops into an adult; the period from puberty to maturity terminating legally at the age of majority and state or process of growing up. The majority of adolescents are also included in the age-based definition of "child", adopted by the *Convention on the Rights of the Child* (United Nations General Assembly, 1989) and are considered as persons under the age of 18 years. To describe and explain different phases of development, adolescence is often divided into early (10–13 years), middle (14–16 years), and late (17–19 years)

adolescence (Sawyer, et al., 2012). Adolescence is characterized by many biological changes (increases in height, acquisition of muscle mass, distribution of body fat and the development of secondary sexual characteristics, hormonal changes), neurodevelopmental changes (decision-making, organization, impulse control, and planning for the future), psychological changes (identity, decision making), and social changes (social roles, interpersonal relations) (Clifton, et al., 2018; WHO, 2014b). During that period, adolescents develop relationships with others and often face various stressors in the process of individuation and identity formation (Skuse, et al., 2017).

According to the work of Erikson, published in 1995, an individual encounters eight psychosocial crises during development over their life. Specifically, younger adolescents till the age of 12 experience feeling of competency and crisis while there are industry and inferiority at the forefront. On the other hand, adolescents between 12— and 18— years old experience ego identity and role confusion. Adolescents becoming young adults experience crises in correlation to their partnership and interpersonal relations (Peplau, 1952). By resolving the individual crisis, the individual develops qualities and skills important for the support of the functioning and further development.

1.4 Adolescents in interpersonal relations

There are different important worlds that adolescents see in regarding connectedness with others. The four major worlds include connectedness to 1) school (school and teachers), 2) family (parents and siblings), 3) friends and romantic partners, and 4) self (Karcher, 2019; Karcher & Finn, 2005).

On their way to becoming adults, adolescents develop important interpersonal relations and connections with family, school, friends, and themselves. Moreover, they become aware of the importance of reciprocal and mutual emotional closure in making relationships (Skuse, et al., 2017). Relationships are affected by their readings, culture, and religion (Clifton, et al., 2018; Karcher, 2019). Moreover, the social development of adolescents depends on its context. It may occur with family members, peers, friends, teachers, or wider community members (American Psychological Association [APA],

2002). Those relationships are influenced by broader social and cultural influences, and access to social and material resources (Skuse, et al., 2017).

Another very important study, the Health Behaviour in School-aged Children — HBSC is a cross-national survey (includes 49 countries) of adolescents and collected data every four years on 11-, 13- and 15-year-old adolescents about health and well-being, social environment, and health behaviours (HBSC, 2014). Slovenia participated in this study in 2001/2002, 2005/2006 (Roberts, et al., 2009), 2009/2010, 2013/2014 (Jeriček Klanšček, et al., 2015), and 2017/2018 (HBSC, 2019). The HBSC study consistently found that the majority of adolescents in Slovenia are satisfied with their life (Jeriček Klanšček, et al., 2015; Ravens-Sieberer, et al., 2007). However, a study showed that with increasing age, adolescents find it harder to talk to their parents and they rated family support with 5.6 on the scale from 1 to 7 (Jeriček Klanšček, et al., 2015).

Similar results were also found in other countries which participated in this study (WHO, 2016a). Moreover, they reported that the workload for school increases with age, and the importance of the opinion of the class teacher's assessment of work for school decreases. Support from classmates and teachers is rated as high. The support from friends is high, among girls it is slightly higher rated than among boys. One in three adolescents communicates daily through electronic media with friends, girls more often than boys. The use of electronic media is increasing with age (Jeriček Klanšček, et al., 2015). Thus, many new interventions for improving the mental well-being of adolescents focus on the online approach (Baldofski, et al., 2019; Banos, et al., 2017; O'Dea, et al., 2020; Reupert, et al., 2019). However, social media can also have a negative impact on adolescent's mental well-being (O'Reilly, et al., 2018a), thus, this needs to be considered when developing interventions for improving adolescents' mental well-being. Support for adolescents can be provided by important people in their lives. The following chapter discusses various sources of adolescents' mental well-being support.

1.5 Supporting adolescents' mental well-being

Mental health and well-being can be maintained by engaging in positive interpersonal relations with significant others. Moreover, significant others (also referred to as support people) can be anyone with whom an individual feels comfortable and whom they trust and respect (Peplau, 1952; Shives, 2012). Interpersonal factors, such as relationships with family, friends, peers, teachers, and other people with whom the adolescents are interacting can have a great influence on adolescents' mental well-being (WHO, 2014c). They represent a narrow social environment (Li, et al., 2014). Social support is a construct that describes the physical and emotional comfort given to individuals thought interaction with family, friends, and other significant people (Israel & Schurman, 1990). It has been discussed that social support promotes one's general health, quality of life, and well-being (Demaray, et al., 2005; Stewart & Suldo, 2011). Adolescent's support is closely related to their quality of life (QoL). The WHO (Janca, 1998, p. 3) defines QoL as "the individuals' perception of their position in life in the context of the culture in which they live and in relation to their goals, expectations, standards, and concerns". QoL is an indicator of overall well-being, happiness and satisfaction with life (Centers for Disease Control & Prevention [CDC], 2000). All concepts of QoL and mental well-being must be considered when interpreting support for adolescents' mental well-being.

In the following chapters support to adolescents from family, friends, teachers, and RNs is explored.

1.5.1 Support by family

Already in 1969, the United Nations defined family as "the narrow sense of a family nucleus, i.e., the persons within a household who are related as husband and wife or a parent and never married child by blood or adoption. So, a family nucleus comprises a married couple without children or a married couple with one or more never-married children of any age or one parent with one or more never-married children of any age. A woman (or man) who is living in a household with her never-married child(ren) should be regarded as being in the same family nucleus as the child(ren) even if she is never

married and even if she is living in the same household as her parents." The definition of the family in Slovenia has remained almost the same. In Slovenia, the following definition was accepted in 2017 by the *Family Code* (Slo. Družinski zakonik): Family is a life-lasting community of a child, regardless of his/her age, with both or one of the parents or with another adult that cares about the child and has certain obligations and rights towards child. The definition and structure of family depend on the socioeconomic characteristics, structure, family life cycle stage, and family context (Ooms & Preister, 1988).

Regardless of the definition and form of it, a family must present a sense of belonging, bonding, closeness, and attachment to each other (APA, 2002). A study conducted in Slovenia showed that family has an important role in maintaining the adolescent's mental well-being and is a protective factor against developing depression and consequently performing suicide (Bračič, et al., 2019). Stewart & Suldo (2011) found that parents' support is a very important predictor of adolescents' mental well-being. They also found that greater perceptions of social support from parents were associated with fewer externalizing symptoms (e.g., rule-breaking behaviour and aggressive behaviour) among students of all achievement levels. Moreover, Rothon et al. (2012) found that good paternal and maternal relationships, high parental surveillance, and frequency of evening meal with family was associated with lower odds of poor mental health of adolescents. Similar results were found by Klineberg, et al. (2006) who established that participants who reported low family and overall social support had an increased likelihood of psychological distress. Colarossi & Eccles (2003) and Wight, et al. (2006) found out that parental support has an important role in maintaining an adolescent's mental well-being. A positive relationship with parents is correlated with better mental health and well-being of the adolescent (Moore, et al., 2018). Moreover, the quality of the relationship between child and parents impacts the child's empathic abilities in adolescence (Boele, et al., 2019).

An aspect of adolescents' health is to recognize when there is a need for parents' support (Miall, et al., 2016) because parent's mental health and well-being can affect a child's mental well-being (Skuse, et al., 2017). When a child is entering the period of

adolescence, he/she often orient himself/herself towards friends and less towards parents. Healthcare professionals must ensure that parents are aware of this and let their child develop healthy and positive relations with others (APA, 2002). International evidence from over 300 research articles on interventions in schools and communities as well as digital interventions shows that interventions that include the development of social and emotional skills have significant positive outcomes for both children and their parents (WHO, 2018). This study is robust and provides evidence-based findings for improvement of adolescent's well-being. The Association for Young People's Health in the UK performed an online survey in 2016 among more than 300 parents asking them about supporting the mental well-being of adolescents. The study included focus groups and individual interviews with parents, participation work with young people, and discussions with stakeholders. The findings show that the biggest issues were waiting times for healthcare treatment, professionals not believing there was a problem, thresholds for intervention set too high, and exclusion from the process by the involved agencies. Thus, parents often felt stressed because they had the feeling they cannot help their child (Association for Young People's Health, 2016). Parents can also experience poor mental well-being when being unable to help their child. For parents to be able to help their child struggling with mental health difficulties they must understand what mental health and well-being are. Parents must recognize their child's needs and seek professional help if needed (Care Quality Commission, 2018).

East (2009) stated that not only parents present family support for adolescents, but also their siblings. Siblings' relationships are dynamic and unique relationships that unravel the basic processes of a persons' development. Bonds between siblings are often emotionally intense, consequently, the potential for influencing children's trajectories is strong (Skuse, et al., 2017). Siblings are often more than just blood relatives, but also friends.

1.5.2 Support by friends

To establish independence, adolescents often orient themselves toward their peers and friends (APA, 2002). Allan (2003) described friendships as egalitarian, non-hierarchical,

and reciprocal relationship. Friends are not supposed to have different power or authority towards each other. To establish a health and positive relationship there must be equal and reciprocal power of each individual. Moreover, adolescents' relations with peers and friends are important as they help them foster their identity and socialize into adult roles (Brown, 2004). Positive relationships with friends are linked with better adolescents' mental well-being (Moore, et al., 2018). In the HBSC study in 2014, adolescents in Slovenia rated their friends' support as average (Pucelj, et al., 2016). Students who perceive greater support from classmates experienced fewer symptoms of internalizing distress (Stewart & Suldo, 2011). Low support from friends is also associated with depressive symptoms (Colarossi & Eccles, 2003; Klineberg, et al., 2006; Wight, et al., 2006). In the meta-analysis, authors Boele, et al. (2019) found that adolescents with higher-quality relationships with peers show more concern and understanding for others than adolescents with lower quality of relationships. Thus, support by friends has a major role in adolescents' life when they are developing relationships, their identity, and independence.

1.5.3 Support by teachers

For many adolescents, school is a prominent part of their lives. In school, they develop relationships with peers and numerous cognitive skills (APA, 2002; Skuse, et al., 2017). Support from teachers was found to have a strong influence on adolescents' self-esteem and mental well-being (Colarossi & Eccles, 2003; Johnson, et al., 2010a; Moore, et al., 2018; Wit, et al., 2011). Barker (2006) states that next to the family, teachers have the most important influence on a child's development. There is strong evidence that suggests the implementation of interventions to teach social and emotional skills at school. Those interventions have a positive impact on adolescents' attitudes toward themselves, others, and school, as well as commitment to the school and academic performance (WHO, 2018). On the other hand, teachers report that they do not have sufficient knowledge, experience, and training for supporting adolescents' mental health needs. They perceive themselves as responsible for implementing school-based interventions but believe that school psychologists have a greater role in adolescents' mental well-being support (Reinke, et al., 2011). When interpreting these results, we

must consider that all schools do not have school psychologists. Moreover, teachers highlighted that there must be attention paid to the gaps in understandings and expectations about what they can reasonably provide in the field of adolescents' mental well-being. The priority for schools must be given to teacher training and professional development in the field of adolescents' mental well-being support (Graham, et al., 2011). A mental health curriculum framework should be implemented for the teachers' training and preparation to ensure effective support for adolescents' mental health and well-being (Kratt, 2018). On the other hand, there is a discussion about the role of school nurses in supporting the mental well-being of adolescents.

1.5.4 Support by registered nurses

Nursing services in school were firstly introduced internationally in the late 1800s to deal with minor illnesses or injuries of children, to provide health education to children, and to provide follow-up care and teaching in the home setting. The primary role of the school nurse was public health and wellness of children (Zaiger, 2000). For years, the school nurse has been involved in the educational system for the promotion and prevention of the health of children and adolescents (Houlahan, 2018). Although research indicates the inconsistency in nursing education, school nurses who have completed additional education report positive results in the provision of services and quality of care (Ravenna & Cleaver, 2016). The sources of professional knowledge for nurses should be nursing theories, that have been developed through different philosophies, disciplines, and paradigms (Pajnkihar, 2003, p. 173). Nurses and Midwives Association of Slovenia (2014) proposed the introduction of a school nurse in Slovenia along teachers and other professional staff who today face many problems for which they are not properly trained. Moreover, nurses know about adolescent's cognitive, social, physical, and psychological development and may know how to approach individuals who experience mental health difficulties. The Resolution on the National Program of Mental Health (Ministry of Health of the Republic of Slovenia, 2017) from 2018 to 2028 emphasizes the need for interdisciplinary work in the field of healthcare and social care for adolescents. The nurse would gain additional knowledge in the field of public health, health promotion, health education, didactics of health education, and

other relevant fields, as well as be involved in the promotion of mental health and preventing the development of mental disorders in adolescents. McGorry, et al. (2007) emphasized that it is of utmost importance to detect mental health problems as soon as possible and to take action to reduce the occurrence of mental disorders in a later period. In this regard, a nurse could have an important role in the promotion of mental health and the prevention of mental disorders (Torkar, et al., 2013) through good therapeutic interpersonal relations (Peplau, 1952). Nursing is a vital part of the health system, as well as institutions and community, and aims to promote the wholeness and integrity of an individual with dignity and well-being in mind, body, and soul (Pajnkihar, 2003, p. 227). There are great advantages of introducing nurses in school settings. However, there is a need for educating nurses to provide the best care for adolescents' mental well-being.

Research shows that nursing care is more effective and more caring if nurses maintain good interpersonal relations with adolescents and their parents (Care Quality Commission, 2018). Nurses have a significant role in supporting both adolescents and their parents. They should ensure that the care they are giving is person-centred, holistic, and best for adolescents and their families.

Concerning RNs in school, there are also effective school-based interventions that can be, after testing and cultural adaptation, implemented in Slovenian school environments to improve adolescent's mental well-being. Those are discussed in the following chapter.

1.6 Effective school-based interventions for maintaining mental health and mental well-being of adolescents

The results described in this chapter have been published (Cilar, et al., 2020a) and are reprinted with permission (Appendix O).

School-based interventions for promoting the mental well-being and preventing mental health problems of adolescents can be divided into two main groups: universal interventions and targeted interventions. Universal interventions focus on the general population, whereas targeted focus on specific groups or individuals that may be at higher risk for developing mental health problems (O'Connor, et al., 2017; O'Reilly, et al., 2018b). When introducing novel school-based interventions, various individuals must be involved in the implementation process, such as teachers, parents, principals, community members, and other professionals (García-Carrión, et al., 2019). Even though evidence is present that school-based interventions have a positive impact on adolescents' mental health and well-being, evidence should be substantiated by improved methodological approaches (Mackenzie & Williams, 2018).

In recent years, the promotion of the mental well-being of adolescents has become an essential activity for maintaining good mental health. However, existing mental well-being interventions, programs, and curricula are often inconsistent (Burckhardt, et al., 2015). O'Reilly, et al. (2018a) state that there is a need for stronger and broader evidence in the field of mental health promotion among the population of young people. Some interventions are already implemented in the school environment, which are not supported by evidence, or their impact is not evaluated. Thus, there is a need for developing a unique multi-dimensional intervention or approach for maintaining an adolescent's mental well-being. To do that it is important to explore existing mental health and mental well-being interventions and assess their effectiveness.

The integration of mental well-being interventions in school settings and curriculum offers an opportunity to discuss mental health and promote a healthy lifestyle as "skills for life" (Skuse, et al., 2017). A systematic review, analysis, and synthesis (PROSPERO

number: CRD42019128 919) showed that there are numerous interventions available to maintain adolescents' mental well-being (Cilar, et al., 2020a) (Table 1.2).

Table 1.2: Characteristics of studies involving mental health and mental well-being interventions (Cilar, et al., 2020a)

No.	Reference (country)	Aim	Study setting and sample	Main Findings
1	Bond, et al., 2004 (Australia)	To determine the effect of a multilevel school-based intervention on adolescents' emotional well-being and health risk behaviours.	26 secondary schools; 3623 students; 13 – 14 years of age	There was **no significant effect** of the intervention **on depressive symptoms, as well as social and school relationships.**
2	Dodge, et al., 2015 (USA)	To test the efficacy of an early intervention to prevent adult psychopathology and improve well-being in early-starting conduct-problem children.	9594 kindergarteners; 55 schools; 4 communities; 891 students; till 25 years of age	**There is an efficacy** of an early intervention in preventing adult psychopathology among high-risk early-starting conduct-problem children.
3	Patton, et al., 2006 (Australia)	To test the efficacy of an intervention in reducing health risk behaviours and improving emotional well-being.	25 secondary schools; 2586 (1999) and 2463 (2001) students; 13 - 14 years of age	The intervention had **no clear effect on** emotional problems.
4	Burckhardt, et al., 2015 (Australia)	To examine the feasibility of an online school-based positive psychology program delivered in a structured format over 6 weeks utilizing a workbook to guide students through website content and interactive exercises.	4 high schools; 572 students; grades 7-12	The online positive psychology program administered within the school curriculum was **not effective**.
5	Kuyken, et al., 2013 (Australia)	To establish the first test of MiSP's efficacy in terms of well-being and mental health immediately following the program and 3 months later.	12 secondary schools; 522 students; 12-16 years of age	The degree to which students in the intervention group practiced the mindfulness skills was **associated with better well-being** and less stress.
6	Rose, et al., 2014 (Australia)	To evaluate the effectiveness of a friendship-building skills program—the Peer Interpersonal Relatedness (PIR)	4 secondary schools; 210 students; no data about the age of the sample	RAP **did not significantly reduce** depressive symptoms. RAP followed by PIR **did significantly reduce** depressive

No.	Reference (country)	Aim	Study setting and sample	Main Findings
		program in comparison with The Resourceful Adolescent Program (RAP).		symptoms. At follow-up, participants in the RAP–PIR condition had achieved **significant increases** in their school-related life satisfaction and **significant increases** in social functioning with peers.
7	Burckhardt, et al., 2016 (Australia)	To examine the efficacy of a school-based mental health program combining positive psychology with acceptance and commitment therapy (Strong Minds).	1 high school; 267 high-school students; 15 – 18 years of age	There was a **statistically significant reduction** of depression, stress, and DASS-Total scores for the Strong Minds condition.
8	Babic, et al., 2016 (Australia)	To evaluate the impact of the 'Switch-off 4 Healthy Minds' (S4HM) intervention on recreational screen-time in adolescents	8 secondary schools; 935 students; no data about the age of the sample	**No intervention effects** were found for mental health, physical activity, or BMI. The intervention effect was **partially mediated** by increases in autonomous motivation.
9	McMahon, et al., 2017 (Austria, Estonia, France, Germany, Hungary, Ireland, Italy, Romania, Slovenia, and Spain)	To examine associations of physical activity, sport participation, and associations with well-being, anxiety, and depressive symptoms.	10 European countries; 168 schools; 11 110 adolescents; 14 – 16 years of age	The frequency of activity was **positively correlated** with well-being and negatively with anxiety and depressive symptoms. More frequent physical activity and participation in sport were found to independently **contribute to** greater well-being and lower levels of anxiety and depressive symptoms.
10	Tomyn, et al., 2016 (Australia)	To determine whether a school-based intervention (the Think Health and Well-being intervention) is effective in reducing depressive symptoms in adolescents.	4 schools; 252 adolescents; age 13 to 17 years	The intervention and control groups **did not differ** in average improvement in symptoms by post-intervention; those with elevated depressive symptoms

No.	Reference (country)	Aim	Study setting and sample	Main Findings
				benefitted most. The difference in trajectories was **not significant**.
11	Christiansen, et al., 2018 (Denmark)	To examine the effect of a 9-month school intervention focusing on physical self-worth, self-perceived sport competence, body attractiveness, social competences, and global self-worth.	24 schools; 2797 children; 10-13 years	All five self-perception variables increased between baseline and follow-up, but there were **no significant differences** between intervention and control schools.
12	Burckhardt, et al., 2015 (Australia)	To examine the feasibility of an online school-based positive psychology program over 6 weeks utilizing a workbook to guide students through website content and interactive exercises.	4 schools; 572 students; 18 years of age	A structured online positive psychology program administered within the school curriculum was **not effective** when compared to the control condition.
13	Carter, et al., 2018 (UK)	To investigate the effects of a positive psychology intervention in school children using a daily diary.	2 primary schools; 606 children; 9-11 year of age	The intervention led to an **increase in happiness and a decrease in depressive symptoms** immediately following the intervention and at a three-month follow-up.
14	Devcich, et al., 2017 (New Zealand)	To test the well-being effects of the developed mindfulness-based program.	Primary school; 91 students; 9-11 years of age	Both programs resulted in **significant increases** in well-being outcomes, but significantly greater changes were observed for the mindfulness group.
15	Elfrink, et al., 2017 (The Netherlands)	To report a process and impact evaluation of the Positief Educatief Programma (Positive Education Programme (PEP)) in primary schools.	2 schools; 184 children; 4-12 year of age; 11 staff	The findings reveal largely **positive attitudes** towards PEP. Results provide evidence about the **positive impact** of PEP on childrens' self-reported well-being and problem behaviour, teachers' awareness

No.	Reference (country)	Aim	Study setting and sample	Main Findings
				of children's strengths, and overall school climate.
16	Freire, et al., 2018 (Portugal)	To examine the intervention's effectiveness of the Challenge: To Be+program.	1 school; 99 adolescents; 13 – 17 years of age	**Higher levels** of self-esteem and satisfaction with life at post-test in the experimental group when compared to the comparison group, after controlling for the pre-test.
17	Haraldsson, et al., 2008 (Sweden)	To evaluate a school-based adolescent health promotion program with a focus on well-being related to stress.	2 secondary schools; 153 participants in the intervention and 287 in the comparison group; 12 – 15 years of age	**No significant difference** was found between the adolescents in the intervention school (IS) and the non-intervention school (NIS) in terms of background factors.
18	Huen, et al., 2016 (China)	To describe and evaluate a Digital Game-Based Learning Program (DGBL)- Professor Gooley and the Flame of Mind.	33 local secondary schools; 498 secondary school students, 192 completed all modules of the program; no data about the age of the sample	Though there was variation in the strength of each of the paths across modules, most of the path coefficients **were statistically significant**. The findings support the effectiveness of promoting youth mental health through DGBL.
19	Johnson, et al., 2016 (Australia)	To assess whether the effects of mindfulness-based interventions in schools could be replicated in a randomized controlled trial in an Australian context; to investigate the range of primary outcome measures; to assess whether any benefits were	5 secondary schools; 247 students in control and 168 in the intervention group at the beginning; no data about the age of the sample	Although acceptability measures were high, **no significant improvements** were found on any outcome at post-intervention or 3-month follow-up.

No.	Reference (country)	Aim	Study setting and sample	Main Findings
		moderated by increased adherence to home practice.		
20	Kang, et al., 2018 (USA)	To find out if gender is a potential moderator for affective outcomes in response to school-based mindfulness training.	4 classrooms; 100 students; no data about the age of the sample	Meditators reported **greater improvement** in emotional well-being compared to those in the control group. Gender differences were detected, such that female meditators reported greater increases in positive affect compared to females in the control group, whereas male meditators and control males displayed equivalent gains.
21	Kimber, et al., 2008 (Sweden)	To analyse the effects of a Social and Emotional Training (SET) on internalizing and externalizing problems during the first 2 years of program implementation.	4 schools; 7-16 years of age	Findings are **favourable**—in aspects of self-image, well-being, and the hindering of aggressiveness, bullying, attention-seeking, and alcohol use. There was, however, no differential effect on social skills. Considering the effects there were positive impacts—albeit **not always statistically significant**.
22	Lendrum, et al., 2013 (UK)	To assess the impact of a secondary Social and emotional aspects of learning (SEAL) on a variety of outcomes for pupils, staff, and schools, and to examine how schools implemented SEAL.	10 secondary schools; no data about the age of the sample	The study indicated program complexity and flexibility as consideration, simplicity, and parsimony as advantageous. Authors suggest that researchers may need to think more carefully about the balance between adaptability and prescription.

No.	Reference (country)	Aim	Study setting and sample	Main Findings
23	Martin & Wood, 2017 (Australia)	To examine the impact of a programme integrating therapeutic music and group discussions (Holyoake's DRUMBEAT programme) on disadvantaged adolescents' mental well-being, psychological distress, post-traumatic stress symptoms and antisocial behaviour.	3 secondary schools; 63 students; no data about the age of the sample	**No significant differences** were detected for differences in psychological distress.
24	McArdle, et al., 2011 (UK)	To evaluate 2 and 3-year outcomes of targeted school-based drama group therapy.	3 primary, 1 middle and 1 high school; 122 children; no data about the age of the sample	By a year post-intervention, symptom rates following both interventions converged and remained low throughout follow-up. Drama group therapy is rapidly **effective** in reducing symptoms.
25	Mfidi, et al., 2018 (South Africa)	To report the process followed in developing the TEAM model for mental health promotion among school-going adolescents.	4 high schools; 12 schoolteachers; 10 school health nurses and 347 adolescents; 15 – 19 years of age	Concepts of self-awareness, self-management and relationship skills were inadequate or non-existent.
26	Theocharidou, et al., 2018 (Greece)	To investigate the impact of combined Creative Dance and BrainDance program based on the Laban Theory of Movement Analysis to health-related quality of life perceptions of primary school students.	1 primary school; 32 students; 10 – 12 years of age	**No differences** between the beginning and end of the educational intervention; implementation produced very good results concerning improvisation, body control, balance, and coordination, as well as kinaesthetic awareness and musical rhythmic skills.

No.	Reference (country)	Aim	Study setting and sample	Main Findings
27	Rees-Evans & Pevalin, 2017 (UK)	To investigate the effectiveness of the Principle Based Model (PBM) as a means of increasing the psychological well-being of staff and pupils.	1 high school; 10 staff and 9 students; 14 – 15 years of age	The pre to post total scores showed **an increase** in psychological well-being for both staff and pupils but only the change for pupils was statistically significant. Post to follow-up total FWBS scores for both staff and pupils showed **no significant change**.
28	Roth, et al., 2017 (USA)	To find out the impact of a comprehensive, multi-target, multi-component, small-group youth-focused positive psychology intervention (PPI) on students' subjective well-being and symptoms of psychopathology, and the extent to which booster sessions can prevent students from experiencing post-intervention declines in subjective well-being and symptoms of psychopathology.	1 middle school; 42 students; no data about the age of the sample	At immediate post-intervention, students who participated in the PPI made **significant** gains in all components of subjective well-being, and there was a trend for them to report less internalizing and externalizing symptoms of psychopathology relative to students in the wait-list control group.
29	Ruini, et al., 2009 (Italy)	To test the efficacy of a new school program for the promotion of psychological well-being.	129 students; no data about the age of the sample	A school intervention based on promoting positive emotions and well-being **was effective** in increasing psychological well-being among adolescents and in decreasing distress, anxiety and somatization.
30	Sarriera & Bedin, 2017 (USA)	To implement and evaluate an intervention program for adolescents' well-being.	2 public schools; 100 adolescents; 10-14 years of age	There was an **increase** in children's well-being in the experimental group in the post-test; however, that positive effect **disappears** in the follow-up assessment. The results showed significant differences

No.	Reference (country)	Aim	Study setting and sample	Main Findings
				between the control and experimental groups in the post-test, demonstrating a positive impact of the intervention.
31	Shoshani & Steinmetz, 2014 (Israel)	To evaluate a positive psychology school-based intervention for enhancing mental health and empowering the educational staff and students.	1 middle school; 537 students; no data about the age of the sample	**Significant decreases** in general distress, anxiety, and depression symptoms among the intervention participants, whereas symptoms in the control group increased significantly. Intervention strengthened self-esteem, self-efficacy, and optimism, and reduced interpersonal sensitivity symptoms.
32	Suldo, et al., 2014 (USA)	To identify middle school students who were less than delighted with their lives and attempt to improve these students' mental health via a 10-week group wellness-promotion.	1 middle school; 55 students; 10 – 12 years of age	**No effects** of the intervention group were identified in the indicators of effect or psychopathology.
33	Tracey, et al., 2018 (Australia)	To evaluate the Acceptance and commitment therapy (ACT) in the Outdoors intervention.	Upper primary school; 9 students; 11-12 years of age	The results suggest that a portion of the participating children reported **improvements** in psychological well-being and skill development. Improvements appear to be mitigated by attendance and level of psychological well-being upon program entry.
34	Tymms, et al., 2016 (UK)	To assess the effectiveness of 2 interventions in improving the physical activity and well-being of school children.	60 secondary schools; 1494 students; 10 – 14 years of age	**No significant effects** were observed for the outcomes. However, small **positive differences** were found for both outcomes for the participative learning intervention.

No.	Reference (country)	Aim	Study setting and sample	Main Findings
35	van de Weijer-Bergsma, et al., 2014 (The Netherlands)	To investigate the effectiveness of an elementary school-based mindfulness intervention incorporated at class level, letting all children benefit from the intervention.	3 elementary schools; 208 children; 8–12 years of age	There were **no significant changes** from baseline to pre-test. Some primary prevention effects on stress and well-being were found directly after training and some became more apparent at follow-up.
36	van Lier, et al., 2017 (New Zealand)	To explore the associations between home gardening and dietary behaviours, physical activity, mental health, and social relationships among secondary school students.	91 secondary schools; 8 500 students; no data about the age of the sample	Gardening was **positively associated** with healthy dietary habits among students and with physical activity and improved mental health and well-being.
37	Vliet & Andrews, 2009 (Australia)	To determine the feasibility and efficacy of a Web-based stress management programme for schools.	8 schools; 464 students; 12 years of age	Knowledge about stress **improved** after the six lessons and students reported that support seeking coping had **increased** and avoidance behaviour decreased. Scores on measures of distress went down and well-being scores **rose**.
38	Vekas & Wade, 2017 (Australia)	To examine the impact of a three-session intervention targeting perfectionism in children on perfectionism, self-criticism, and well-being.	5 schools; 212 students; 10 – 13 years of age	At post-intervention, children in the intervention group had significantly lower perfectionism than the control group and at the 3-month follow-up had significantly **higher levels** of well-being.
39	Veltro, et al., 2015 (Italy)	To evaluate the efficacy of the intervention.	1 secondary school; 4 classes; 79 students; 14-16 years of age	The results showed **improvement** in perceived self-efficacy, emotional coping, and overall well-being.

No.	Reference (country)	Aim	Study setting and sample	Main Findings
40	Weeks, et al., 2017 (UK)	To consider the factors impacting on the success and outcomes of a Cognitive behaviour therapy (CBT) -based group intervention.	1 school; 19 girls; 11–14 years	Influential variables were included pupil identification, measures of change applied and the role of the school staff. Educational Psychologists can play a key role in **increasing** access to psychological therapies.
41	Evers, et al., 2007 (USA)	To evaluate the interventions.	12 middle schools; 6th–8th grades; 13 high schools; 1237 middle school students (11–14 year of age); 1215 high school students (14–17 years of age)	There were **significant treatment effects** for both intervention groups when compared to control for both the middle and high school programs.
42	Foret, et al., 2012 (USA)	To examine the feasibility and effectiveness of a relaxation response-based curriculum.	1 high school; 104 students; no data about the age of the sample	The intervention group showed **significantly greater improvements** in levels of perceived stress, state anxiety, and health-promoting behaviours when compared to the waitlist control group.
43	Gold, et al., 2017 (Australia)	To examine the effectiveness of group music therapy (GMT) intervention for young people at risk of developing mental health problems.	20 secondary schools; 100 students; no data about the age of the sample	**No effects of the interventions were found**; both groups tended to show small improvements over time.
44	Gigantesco, et al., 2015 (Italy)	To evaluate the effectiveness of the programme based on a structured handbook.	9 high schools; 308 students; 10 – 14 years of age	**Improvement** in self-efficacy in regulating negative affect, overall psychological well-being, and satisfaction with life. Programme produced **significant positive**

No.	Reference (country)	Aim	Study setting and sample	Main Findings
				effects on the mental health status of participating students.
45	Bannink, et al., 2014 (The Netherlands)	To evaluate the effect of E-health4Uth and E-health4Uth with consultation on well-being and health behaviours.	12 secondary schools; 1256 adolescents; 15-16 year of age	The E-health4Uth intervention showed **minor positive results** in health-related quality of life; the E-health4Uth and consultation intervention showed **minor positive results** in the mental health status of adolescents; E-health4Uth showed **minor to moderate positive results** in mental health status and health-related quality of life.
46	Bonhauser, et al., 2005 (Chile)	To evaluate the effects of the program over one academic year.	1 high school; 198 students; 15 years of age	Anxiety score **decreased** in the intervention group; self-esteem score **increased** in the intervention group and decreased in the control group after the end of the program; **no significant** change was observed in the depressive score.
47	Calear, et al., 2016 (Australia)	To test the effectiveness of an online self-directed anxiety prevention program in and to compare two methods of implementing an anxiety program in schools.	30 schools; 1767 students; 12 – 18 years of age	At post-intervention, 6- and 12-month follow-up **no significant differences** were observed between the intervention and control conditions for generalized anxiety, social anxiety, depressive symptoms, or mental well-being.
48	Garcia, et al., 2013 (USA)	To examine the feasibility and preliminary outcomes of Project Wings Girls' Groups.	2 high schools; 42 adolescents; 13-16 year of age	Findings were **not statistically powered**, but the trial demonstrated findings in the expected direction, including reduced

No.	Reference (country)	Aim	Study setting and sample	Main Findings
				perceived stress and depression and increased connectedness.
49	Loureiro, et al., 2016 (Portugal)	To identify the qualitative impact of the +Contigo Project.	4 schools; 16 students; no data about the age of the sample	The +Contigo project helped students to solve problems, improve their interpersonal skills and cope with the adolescence period. Students **improved** their self-esteem and self-knowledge.
50	Tomba, et al., 2010 (Italy)	To examine the differential effects of strategies for promotion of psychological well-being and removal of distress.	4 middle schools; 8 classes; 162 students; no data about the age of the sample	Well-being and symptom-focused interventions produced **slightly different effects** on psychological dimensions.
51	Duthely, et al., 2017 (USA)	To test a novel gratitude meditation intervention among a cohort of ethnically diverse adolescents.	1 middle school; 75 students; no data about the age of the sample	The intervention **significantly increased** happiness, emotional engagement with school, and gratitude.
52	Chiumento, et al., 2018 (UK)	To assess the mental well-being of the children pre- and post-intervention, and the value of the evaluation methods and "Five Ways to Well-being" evaluation framework.	3 schools; 36 students; 9 – 15 years of age	Haven Green Space intervention was associated with **improved mental well-being**. Mental Well Being Impact Assessment factors relating to mental well-being were positively impacted in all three schools.
53	Kidger, et al., 2016 (UK)	To assess the feasibility and acceptability of the intervention and explore the justification for evaluating the intervention.	6 schools; 2616 students and 1024 staff; 12 – 15 years of age	The Wellbeing in Secondary Education (WISE) intervention is **feasible and acceptable** to schools.

No.	Reference (country)	Aim	Study setting and sample	Main Findings
54	Wolfe, 2017 (Australia)	To develop and evaluate the anti-bullying school-based program – ThinkSMART program.	2 primary schools; 45 students and 26 staff in phase 1 166 (intervention group) and 120 (control group) students in phase 2	The ThinkSMART program **did not show statistically significant improvements** in over-assessed time. Higher ability to solve problems buffered against negative bullying consequences on mental health.
55	Stevens, et al., 2000 (Belgium)	To evaluate the school-based anti-bullying intervention program.	18 primary and secondary schools; 151 (primary school) and 284 (secondary school) students	The proposed anti-bullying program showed a **positive impact** in primary school students and no impact in secondary school students.
56	Berry & Hunt, 2009 (Australia)	To assess the efficacy of cognitive behavioural manualized group intervention program on adolescent's mental well-being.	7 secondary schools; 22 students in the intervention and 24 in the control group; 12-15 years of age	The intervention showed **efficacy in reducing** adolescents bullying experiences concerning anxiety, depression, and distress. No effect was seen concerning self-esteem and the change of aggressive responses.
57	Kärnä, et al., 2011 (Finland)	To develop and evaluate the KiVa program to prevent bullying in schools.	Primary and secondary schools; 4201 students in the intervention and 3965 in the control group; 10-12 years of age	The proposed program showed **positive results** in reducing school bullying and victimization in correlation with well-being at school.

Interventions need to be evaluated for quality because of various predatory journals and studies, and thus misleading findings (Oermann, et al., 2018). Predatory publishing, so-called write-only publishing, is exploitative academic publishing that involves charging publication fees to authors without checking articles for quality and legitimacy. Thus, published articles may mislead readers and are often of low quality. In Appendix D all studies were assessed for quality using the Grading of Recommendations Assessment, Development and Evaluation — GRADE quality of evidence assessment. GRADE is a widely used tool to assess research quality. It is a structured and rigorous process for decision-making with well-defined questions, followed by an assessment of the certainty in the evidence and leading to the development of recommendations (Morgan, et al., 2016). The analysis revealed that there are very few (*n* = 4) studies with high quality of evidence. All available interventions are not effective, thus identified interventions were synthesized by their effectiveness (Appendix E).

Interventions were synthesized in subthemes and three main themes (Table 1.3). Three broad themes were identified from the synthesis considering the proposed multidimensional approach to well-being (Sarriera & Bedin, 2017, pp. 10—16): psychological well-being, subjective well-being, and psychosocial well-being. These concepts can be integrated into a new adolescent mental well-being intervention that is based on evidence and presents a multi-level intervention (Cilar, et al., 2020a). Only one study investigated the effectiveness of the multilevel intervention on adolescents' mental well-being and showed that there was no significant effect of the intervention (Bond, 2004). Other characteristics of the included interventions are shown in table 1.3 (Cilar, et al., 2020a).

Table 1.3: Data synthesis of identified mental well-being interventions (Cilar, et al., 2020a)

Categories	Subcategories	Codes
Psychological well-being	Quality of life	Global life satisfaction, gratitude; satisfaction with life
	Mental well-being	Behaviours and emotions; personal growth
		Autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance
		Anxiety, depressive symptoms, and mental wellbeing
		Thinking style, self-esteem, coping skills, and social skills
Subjective well-being	Positive psychology	Encourage young people to work to their full potential, become more fully engaged in all aspects of their lives, and to build resilience
	Positive climate	Promote aspects of functioning and health
	Emotional well-being	Self-awareness, self-regulation, motivation, and social skills
	Emotional intelligence & emotional literacy	Happiness, emotional engagement with school, and gratitude
		Social and emotional skills
Psychosocial well-being	Social inclusion	School-, family-, peer- connectedness, stress, depressive symptoms, anxiety, coping, efficacy, hope
		Security (a student's sense of safety), communication with teachers, and broader participation in school life
		Peer Interpersonal Relatedness
	Physical activity	Physical activity, sports participation, and mental health
		Sporting skills and physical fitness, sport competence, body attractiveness
	Mindfulness	Breath counting, stop and be present, mindfulness of routine daily activities including walking, and watching thought traffic
		Body-based and breath-based practices for exploring the interplay between physical sensations, thoughts, emotions, and relationships with others
	Problem-solving and stress reduction	Problem-solving, critical thinking, communication, interpersonal relations, empathy, and emotion-coping methods
		Effective coping skills and ways of dealing with problems of day-to-day life

Psychological well-being

Out of 57 studies with identified mental health and well-being interventions, more than half were effective. Moreover, school interventions that protect adolescents' psychological well-being showed significant effects in personal growth and decreasing distress and anxiety (Ruini, et al., 2009). Dodge, et al. (2015) found that early intervention improves well-being in early problematic children. During their research, they offered children's social skill friendship groups, parent training groups, guided parent-child interaction sessions, and paraprofessional tutoring in reading. In the next years, they organized parent-youth groups on topics of adolescent development, tobacco, alcohol, drugs, and decision making. Moreover, they conducted individualized interventions for parent monitoring, peer affiliation, academic achievement, social cognition, and emerging identity. Tomyn, et al. (2016) introduced an intervention that involved a total of 46 minutes of weekly sessions during well-being classes. They found out that there was no difference between intervention and control groups, but further analyses showed that responsiveness was variable within the intervention, and those with elevated depressive symptoms benefitted the most. Freire, et al. (2018) investigated if *The Challenge: To be+* program has an impact on adolescents' positive development. They found out that the program increased self-esteem and life satisfaction. Theocharidou, et al. (2018) investigated how creative dance influences health-related quality of life. They found out that there were no differences between the beginning and end of the educational intervention.

Subjective well-being

Positive psychology interventions (PPIs) are relatively different from traditional interventions that use cognitive behavioural therapy techniques. PPIs are based on the scientific study of happiness, well-being, and flourishing (Burckhardt, et al., 2015). PPIs are especially effective in those with the greatest need as it leads to an increase in happiness and a decrease in depressive symptoms (Carter, et al., 2018). PPI showed significant improvements in all components of subjective well-being in research conducted by Roth, et al. (2017) and Shoshani & Steinmetz (2014). The PPI showed not only positive results on student's well-being but also positive attitudes from teachers

and parents (Elfrink, et al., 2017). PPI together with the emotion regulation strategy of acceptance might be effective in reducing mental health symptoms and improving well-being in adolescents (Burckhardt, et al., 2016). On the other hand, negative results were obtained in the study conducted in middle schools (Suldo, et al., 2014). Moreover, modern technology has shown positive results in maintaining adolescents' well-being. An example of good practice is the Internet intervention for mental health which used technologies and digital innovations of the DGBL. It showed positive results and was able to enhance youth mental health (Huen, et al., 2016).

Psycho-social well-being

Social inclusion in school is an important construct of the psycho-social well-being of adolescents. Patton, et al. (2006) found that intervention that focused on social inclusion after 4 years of implementation reduces health risk behaviours, but the intervention had no clear effect on the emotional problems of adolescents. Moreover, relationships with peers also have a big impact on one's mental well-being. Rose, et al. (2014) found that the intervention focused on peer interpersonal relatedness reduced depressive symptoms and improved social adjustment and school-related life satisfaction in the longer term.

Ho, et al. (2017) investigated how an intervention based on physical activity affects adolescents' mental well-being. They concluded that the intervention improved adolescents' mental well-being, psychological assets, physical fitness, and physical activity levels. Another large study was conducted in ten European countries among a large sample (11.110) of adolescents. They found a statistically significant positive correlation between frequency of activity and well-being and a negative correlation with anxiety and depressive symptoms. They concluded that physical activity and participation in sport were found to independently contribute to greater well-being and lower levels of anxiety and depressive symptoms (McMahon, et al., 2017). On the other hand, Christiansen, et al. (2018) established significant differences between intervention schools based on physical activity intervention and control schools.

Mindfulness-based interventions are often used as methods to promote the psychological well-being of adults, yet less research is done among adolescents (Christiansen, et al., 2018). Kuyken, et al. (2013) found that mindfulness interventions are effective in establishing better well-being. Similar findings were reported by Devcich, et al. (2017). Moreover, students that practiced mindfulness reported lower levels of stress. Students that meditated reported greater improvements in emotional well-being (Kang, et al., 2018). On the other hand, Crescentini, et al. (2016) found that mindfulness intervention shows no effect in lowering depressive symptoms among adolescents after training. Emerson, et al. (2017) found out that there was no change in well-being and mindfulness.

Stress is a common issue adolescents are facing nowadays. Thus, many interventions focus on solving those stressors and reducing the level of stress to maintain adolescents' well-being. Haraldsson, et al. (2008) established that interventions like massage and mental training helped adolescents maintain a very good or good sense of well-being in relation to stress. Well-known Zippy's Friends Programme which is currently running in 27 countries and is based on a theoretical framework for coping has shown positive results in a study conducted in Ireland among primary school children (Clarke, et al., 2015). Results show that there is a positive impact of the program on children's use of problem-solving and support-seeking strategies in coping with certain problematic situations. Moreover, gardening is one of the interventions that showed positive results in reducing stress among adolescents (van Lier, et al., 2017).

It is evident that the proposed multidimensional approach by Sarriera & Bedin (2017, pp. 10-16) covers all concepts of adolescents' well-being. In the author's opinion, a holistic approach is needed when developing those interventions. There are various mental health and well-being interventions available for the implementation in the school, but there is limited evidence on their efficacy. The intervention implementation process should take into account interventions specifics, development process, characteristics of the country where the intervention was developed and characteristics of the environment where the intervention should be implemented.

As evident from the literature, it is important that interpersonal relations between adolescents are considered when ensuring adolescents mental well-being. Joyce Travelbee (1977) described various aspects of interpersonal relationships in nursing. She explains that the nurse can know the patient's needs only using a disciplined intellectual approach in combination with a therapeutic use of self. McCarthy & Aquino-Russell (2009) compared the theory of interpersonal relationships (Peplau, 1952) and the theory of human origin (Parse, 1992). Both theories are focused on the patient and his needs, differing in goals. Peplau (1952) explains that the nurse assists the patient through many tasks and through the stages of the interpersonal relationship. Parse (1992) emphasizes the presence of the nurse next to the patient, and the personal growth of the nurse and the patient through the interpersonal relationship. Both theorists emphasize the importance of interpersonal relationships, but Peplau (1952) defines this relationship more precisely and the stages that a patient and nurse must include in order for their relationship to be successful. She also emphasizes the importance of communication in the nursing process. To guide our research, the theory of interpersonal relations was chosen. The theory background, concepts of metaparadigm and basic theory concepts are described in the following chapter.

1.7 Theoretical framework

Theoretical frameworks are often used in qualitative research to lead the whole research. Parahoo (2006) suggested using a theoretical framework when research is underpinned by one theory. Moreover, the conceptual framework draws on concepts from various theories and findings to guide research.

1.7.1 Theory of interpersonal relations

To detect mental health problems early adolescents must be comfortable talking about it and have someone who they trust, whether a parent, friend, teacher, or nurse. To ensure trust, a good interpersonal relationship must be developed (Cilar & Pajnkihar, 2020).

Nursing theory sheds light on the importance of theory itself through clarifying nurses' values, beliefs, and thoughts about a person, his or her health, and life. It also provides

a guide for practice (McCarthy & Aquino-Russell, 2009). American psychiatrists and psychoanalysts Harry Stack Sullivan, Erich Fromm, and Karen Horney greatly influenced the work of Hildegard Elizabeth Peplau, who developed the theory of interpersonal relationships and introduced it to the field of psychiatric nursing. Peplau first published the Theory of Interpersonal Relations in 1952. Peplau (1952) focused attention on the patient, and his/her needs and desires in the nursing process, rather than the scientific approach in research (Hagerty, 2015). Peplau (1952) emphasizes that the purpose of theory is to help nurses better understand the relationship between nurses' personality and function. Moreover, Peplau (1952) emphasized that the relationship between a nurse and a person supported by services is essential, as good interpersonal relationships contribute to well-being, faster recovery, and quality of care for the person (Cilar & Pajnkihar, 2020; Searl, et al., 2014).

1.7.2 Theory philosophy

The philosophy of science influences the theorists' beliefs about what matters to the nurse and the patient (McKenna, et al., 2018). Sellers (1991) believes that Peplau was influenced by a totalitarian paradigm with an emphasis on the acquired view of knowledge and logical positivism. On the other hand, Gastmans (1998) and Nystrom (2007) believe that the author was influenced by phenomenology, which is based on the rejection of the possibility of producing causal explanations of human paediatric, objective interpretation, and classification of the world. Although the author emphasizes that the primary purpose of nursing is the patient's need, we believe that it was influenced by logical positivism since the theory originated during this period.

We also believe that the theory is explanatory because it clearly describes the phenomenon, concepts, and provides links between concepts. Many authors classify the theory of interpersonal relations as a middle-range theory (Fernandes & Miranda, 2016; Hagerty, 2015; Peterson, 2013), while Peplau defines it only as a theory (Pajnkihar, 2003). We agree that this is a middle-range theory, as the phenomenon, concepts, propositions and assumptions are clearly and concretely stated. Operational definitions are provided, and empirical testing of propositions is possible (Cilar & Pajnkihar, 2020).

1.7.3 Concepts of metaparadigm and basic theory concepts

The concepts of metaparadigm are (Peplau, 1952, pp. 12–82):

- Person – an organism that lives in an unstable equilibrium. Each individual has physical, psychological, and social needs. In an unstable environment, individuals are constantly faced with new situations and problems.
- Health – a symbol for the word that includes the movement of the personality forward and other human processes in the direction of creative, constructive, productive, personal, and community life.
- Nursing – an important therapeutic interpersonal relationship between the nurse and the patient. It works in conjunction with other human processes that enable the health of individuals in the community and the growth and development of nurse and patient.
- Environment – includes physiological, psychological, and social fluidity. It is also a set of forces outside the organism within the context of a culture. The environment can be unstable, physiologically, psychologically, and socio-culturally intertwined.

The concepts of metaparadigm in the theory of interpersonal relationships are interrelated and complementary, as well as related to basic concepts of the theory. The main concept of the theory is the interpersonal relationship defined by the author as the relationship between two or more interacting persons (Peplau, 1952). Peplau describes psychodynamic nursing, which represents the ability to understand an individual's behaviour to identify the problems they are facing (Pajnkihar, 2003).

Peplau (1991) also defines the following concepts:

- Anxiety – an immediate response to a psychic threat and may manifest as mild, moderate, severe, and panic anxiety.
- Communication – an interpersonal process involving both verbal (the use of words, concepts, and symbols to express thoughts or feelings) and non-verbal communication (the relationship between at least two people and is not language-dependent but involves empathy).

- Pattern integration – occurs when one person's samples are used to interact with another person's samples.
- Thinking – a process whereby experiences can be stored, organized, and retrieved. The conceptualization of events differs according to the way of thinking.
- Prejudices – before the nurse and the patient enter into interpersonal relationships, prejudices are created that are shaped by the individuals' previous experiences.
- Self-understanding – the patient and the nurse need to understand themselves to create a good interpersonal relationship.
- Learning - an active process that involves thinking and perceived abilities.

Peplau (1952, pp. 18-31) describes the structural concepts of interpersonal relationships, consisting of four interconnected phases where different roles of the nurse are exchanged and complemented (Franzoi, et al., 2016; Pajnkihar, 2003):

- Orientation phase – Individuals react differently in case of illness and in situations where they need help. At this stage, the nurse and patient define the perceived needs and set goals. Throughout the entire nursing planning process, the nurse interacts with the patient and his or her family and takes into account their wishes and needs. At this stage, the focus is not on illness, but on building mutual trust and a dynamic learning experience. The phase ends when the patient becomes aware of their problems and is ready to participate.
- Identification phase – the patient gets to know the people who will help him and get involved in his medical treatment, expressing emotions, and facing his problem. The nurse and the patient devise a plan for utilizing resources and nursing interventions that the patient can make optimal use of. The patient is involved in the nursing process and maybe independent or partially or completely dependent on the nurse. When a nurse allows a patient to express their emotions and receive the care they need, the patient may face the disease in such a way that it presents him with an experience that shifts emotions to personal empowerment.

- The interaction phase – occurs when a patient identifies with a nurse who can identify and understand interpersonal relationships in a situation before it occurs. All systems are involved in solving the problem, and the patient receives all the knowledge and skills involved in health care. Nurses use communication skills such as clarifying, listening, receiving, teaching, and explaining to build a good relationship with the patient.
- Resolution phase – this phase occurs when the interpersonal relationship between the nurse and the patient is established and both become independent, strong, and mature; the health problem is resolved as well. New goals and new steps towards further development and personal growth have been formulated.

The stages of the interpersonal relationship are interconnected and consistent with the stages of the nursing process (Cilar & Pajnkihar, 2020).

Peplau (1952, pp. 43–72) identifies the following nurse roles as representing the mechanisms the nurse uses in interpersonal relationships (Pajnkihar, 2003):

- A foreign person – is a person who has nothing in common with another person. It occurs in the first stage when the nurse and the patient do not know each other. Courtesy and emotional support help to further develop relationships (p. 44).
- Source – a person as a source of information and knowledge that is clearly and unambiguously conveyed to the patient.
- Teacher - transfer of expertise to the patient. Learning is the most important aspect of nursing because, through learning, the nurse guides the patient to personality growth and development. The role of the teacher also integrates the other roles and is based on the patient's wishes and needs.
- Leader – the nurse's job is to encourage patient involvement and active participation in the nursing process.
- Compensator – the nurse assumes the role of another person who is important to the patient.

- Counsellor - in recognition, acceptance, confrontation, and problem-solving. The role of the counsellor depends on the level of relationship between the nurse and the patient.
- Expert - provides appropriate nursing care with his or her clinical skills.

The roles of the nurse are interchanged through the interpersonal relationship with the patient according to the patient's problems and needs. They also determine psychological needs and give rise to psychological tasks that nurses must perform in nursing situations. The author claims that each patient is different and has different needs and requirements. Also, the nurse must be mature to cope with difficult situations (Pajnkihar, 2003; Peplau, 1952).

The interpersonal relations between nurse and person/client are affected by their previous experience, self-understanding, and health. It is also important to consider their values, culture, beliefs, and expectations (Cilar & Pajnkihar, 2020). Figure 1.3 was developed based on the Theory of interpersonal relations by Peplau (1952).

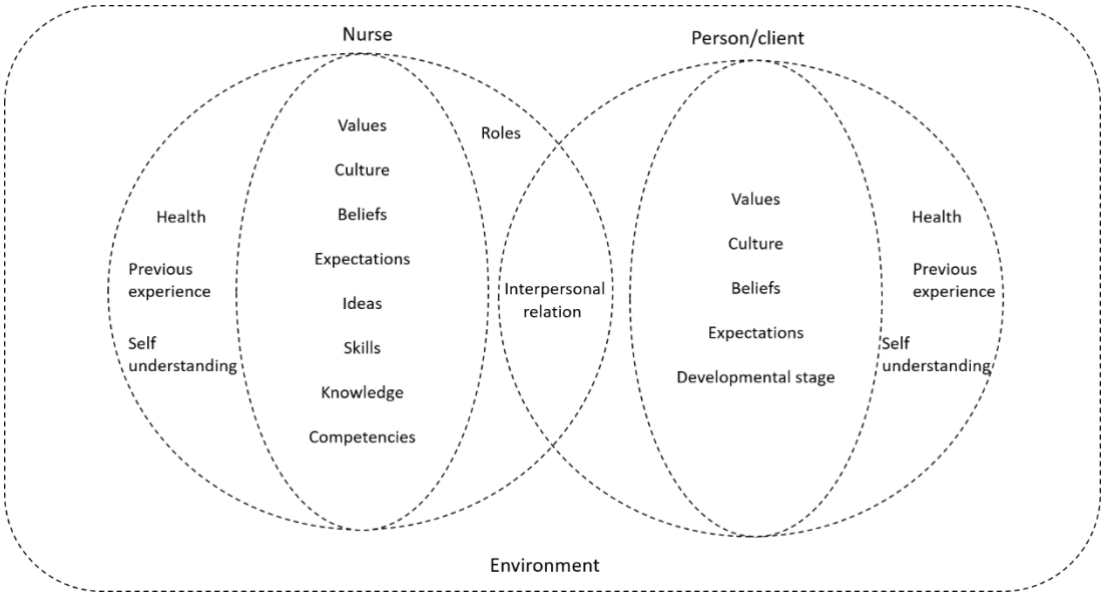


Figure 1.3: The theory of the Interpersonal relations (Peplau, 1952)

The nurse interacts with persons/clients, who may be infants, children or adolescents, and their families. Through the stages of interpersonal relationships, the roles of the nurse change, with their knowledge, competencies, ideas, skills, and experience contributing to quality nursing care for the child, adolescent, and family. We believe that

the theory is applicable in areas where interpersonal relationships and communication between the nurse and the person/client can be established, and therefore it is concluded that the theory is applicable and can be applied in the field of adolescent's mental well-being. The theory provides many theoretical definitions and explanations that can help paediatric or school nurses understanding of interpersonal relationships and provide a theory-driven guide to nursing. However, before applying the theory to the Slovenian environment, it must be tested (Cilar & Pajnkihar, 2020). Further research in this area is important to improve theory-based nursing quality, incorporating a holistic person-centred approach as the person/client is at the heart of nursing. The theory of interpersonal relations guided this research because interpersonal relations are important factor in adolescents' mental well-being. Theory of interpersonal relations was published in 1952 but it is still relevant for adolescents in the 21st century. Good interpersonal relations are important for adolescents because adolescence is often a difficult process of development into adulthood. Adolescence is seen as a period of crisis characterized by profound change. Although, the majority of adolescents go through this stage successfully without experiencing particular traumas, their mental well-being is graded as average (Corsano, et al., 2006). Thus, much effort was focused on the individual and interpersonal level for promotion of adolescents' mental well-being. Interpersonal relations are an important factor contributing to adolescent's mental well-being. Therefore, we believe that the theory of interpersonal relations is appropriate for conducting the proposed research.

2 Aims of the doctoral dissertation

The aim of the doctoral dissertation is to identify the perceived nursing support in correlation with adolescents' mental well-being and the perception of a narrower social environment about mental well-being support for adolescents. Furthermore, the study aimed to establish how adolescents' support linked to mental well-being in terms of nursing care can be improved.

The goals of the doctoral dissertation are to:

- define mental health, mental well-being, and mental disorders,
- define the period and characteristics of adolescence,
- explore how adolescents perceive the role of a registered nurse (RN) in supporting mental well-being,
- determine whether support by family, and friends is related to the mental well-being of adolescents,
- find out how adolescents, parents, teachers, RN, and legislators perceive support for the mental well-being of adolescents,
- a theoretical model for supporting adolescents' mental well-being in terms of nursing care based on obtained data.

3 Doctoral dissertation research thesis

The main thesis of the doctoral dissertation is: *The mental well-being of adolescents correlates with the support of family, and friends, and the perception of this differs between adolescents, parents, teachers, friends, registered nurses, and legislators*.

3.1 Research questions and hypotheses

In the doctoral dissertation, the following research questions (RQs) were answered:

RQ_1: *How do adolescents, parents, teachers, RNs, and legislators perceive adolescents' mental well-being support?*

RQ_2: *What are the obstacles faced by RNs in their work in the field of adolescents' mental well-being?*

RQ_3: *To what extent do adolescents receive support from RNs?*

Studies show that a vital role in supporting the mental health of adolescents is provided by the family (Betancourt, et al., 2017; Moore, et al., 2018). Good relations with family and parents show better mental well-being of adolescents (Žukauskienė, 2014). In a survey conducted in European Union countries and Slovenia in 2014, adolescents assessed the support of the family, but they did not investigate its connection with mental well-being. Studies investigating the link between social support and mental well-being show that there is a statistically significant correlation between them (Ravens-Sieberer, 2009; Ravens-Sieberer, et al., 2005). Therefore, the doctoral dissertation aims to determine whether family support is related to the mental well-being of Slovenian adolescents. Thus, the following hypothesis was formed:

H_1: *Support for adolescents by the family is related to the mental well-being of adolescents.*

In the survey Health behaviour in school-aged children in 2014, adolescents rated the support of friends as average (Pucelj, et al., 2016). The correlation to mental well-being was not investigated. Therefore, the following hypothesis was formulated:

H_2: *Support for adolescents by friends is related to the mental well-being of adolescents.*

In a study among the Slovenian population of nursing students, it was shown that the level of mental well-being varies according to age and gender, but no statistically significant difference would confirm this. Among the population of nursing students in Northern Ireland, there is a statistically significant difference in mental well-being among students of different ages (Cilar, 2017). Based on the findings, the following hypothesis was set:

H_3: *The perceived level of support from the RNs differs between students by age and gender.*

4 Research methods

In the following chapter, research methodology, philosophy, methods, research environment, research sample, data collection procedures, ethical aspects and assumptions and limitations of the study are described.

4.1 Research methodology, philosophy and methods

Research methodology refers to ways of obtaining, systematizing and analysing data. Research methods are, as techniques, used to structure a study, gather, and analyse information in a systematic fashion (Polit & Beck, 2017).

The research was based on the paradigm of pragmatism, which supports the views of quantitative and qualitative approaches, most often using mixed methods (Polit & Beck, 2017). The research problem is complex and can be answered exclusively using both approaches. Founder Charles Sanders Peirce (1905) defined pragmatism as a method of using scientific logic to clarify the meaning of concepts or ideas through exploring their potential links to the real world. Within the framework of research-based on pragmatism, induction and deduction are equally important. Pragmatism enables us to combine several sources of knowledge – adolescents, parents, teachers, RNs, and legislators to create a useful solution in the field of mental well-being of adolescents. In the doctoral dissertation, we used a mixed-method approach that combines quantitative and qualitative methodology (Chiang-Hanisko, et al., 2016). When using mixed methods, the researcher collects and analyses data, integrates findings, and formulates conclusions through quantitative and qualitative approaches or methods in one single study (Tashakkori & Creswell, 2007). A sequential explanatory approach was used, where a quantitative part of the research is conducted at the beginning and the qualitative part of the research clarifies the obtained quantitative results (Brown, 1996; Newman & Ramilo, 2010). Using quantitative methods, we gained insight into the state

of adolescent's mental well-being, and support from parents, friends, and teachers. Using qualitative methods, adolescents' perceptions of mental well-being and support by adolescents, parents, teachers, RNs, and legislators was assessed. Based on the results of the quantitative part of the study, we created a guide for semi-structured interviews in the focus groups.

The research methodology uncovered how knowledge was acquired, where research methods represent steps or strategies that helped collect and analyse data (Polit & Beck, 2017). The research plan proposal with the selected methodology and methods is presented in figure 4.1.

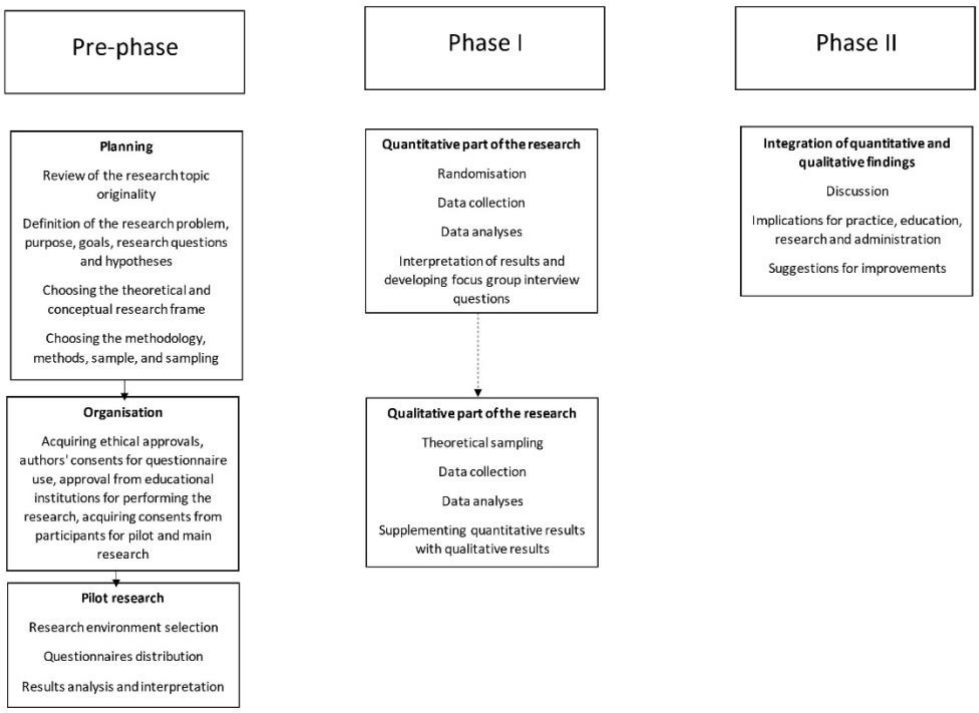


Figure 4.1: Research plan

Research was conducted following three phases: pre-phase, phase I and phase II. In pre-phase planning, organisation and pilot research were conducted; in phase I both quantitative and qualitative part of the research were conducted and analysed; in phase II integration of quantitative and qualitative part of the research was performed. Also, discussion, implication for practice, education, and research were provided.

Research methods used in 1) the systematic literature review, analysis, and synthesis; 2) pilot study; 3) quantitative part of the study; and 4) qualitative part of the study are described in following chapter.

4.1.1 Systematic literature review, analysis, and synthesis

The descriptive method of research was used to obtain findings from the best and most recent evidence in the field of supporting the mental well-being of adolescents by family, friends, teachers, and RNs. The first literature review was conducted to define the problem. A systematic literature review, analysis, and synthesis were performed in March 2019 (Cilar, et al., 2020a). Inclusion and exclusion criteria, as well as search limits have been used (Table 4.1).

Table 4.1: Inclusion and exclusion criteria

	Inclusion criteria	Exclusion criteria
Population	Adolescents between 10 and 19 years of age, adolescents that are attending school	Children younger than 10, adults older than 19 years, adolescents that are not attending school settings
Intervention	Universal interventions for the prevention of mental health disorders and mental health promotion	Interventions for mental health disorders only, interventions for other diseases, psychological counselling programs
Outcome	Mental well-being	Other outcomes (e.g., improvements in mental health disorders)
Study type	Quantitative studies, qualitative studies, mixed-method studies	Reviews, protocols, comments, editorials, duplicates
Language	English, German, Slovenian, Croatian	Other languages

The inclusion and exclusion criteria were developed to answer the research question. Criteria were developed by considering population, intervention, outcome, time frame, study type, publication access and publication language. The inclusion criteria included the population of adolescents, interventions for promotion of mental health and prevention of mental health disorders, professional and scientific publications, and the English, German, Croatian or Slovenian language. The timeframe was not set because we wanted to systematically review the research done so far in the field of supporting mental health for adolescents.

The literature search was performed in five international databases: Web of Science, Medline, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane Library, and PsychARTICLES using keywords and search strings shown in table 4.2.

Table 4.2: Search strategy

	Keywords/ Databases	Web of Science	Medline	CINAHL	Cochrane Library	PsycARTICLES
1	(mental well-being OR mental well-being)	19 310	5 221	2 970	3 110	153
2	(adolescen* OR teen* OR puber OR schoolchild* OR primary school* OR secondary school* OR elementary school* OR high school* OR youth*)	2 176 783	339	489 672	158 917	27 302
3	(school interven* OR school intervention study)	53 465	9 677	4 853	31 400	776
4	1 AND 2 AND 3	568	42	16	738	1

All steps of the literature search are shown in the Preferred reporting items for systematic reviews and meta-analyses – PRISMA flow diagram (Moher, et al., 2009) (Figure 4.2).

Using the final search string, a total of 1 340 records were identified. All review steps were performed independently by two researchers. There were 141 duplicates identified and removed. The remaining 1 199 records were reviewed by the title and abstract, 134 full-text articles were reviewed by two independent researchers. A total of 57 records were identified as suitable and analysed in detail. Three major themes were identified as central to establishing good mental well-being of adolescents in school: psychological well-being, subjective well-being, and psychosocial well-being (Cilar, et al., 2020a).

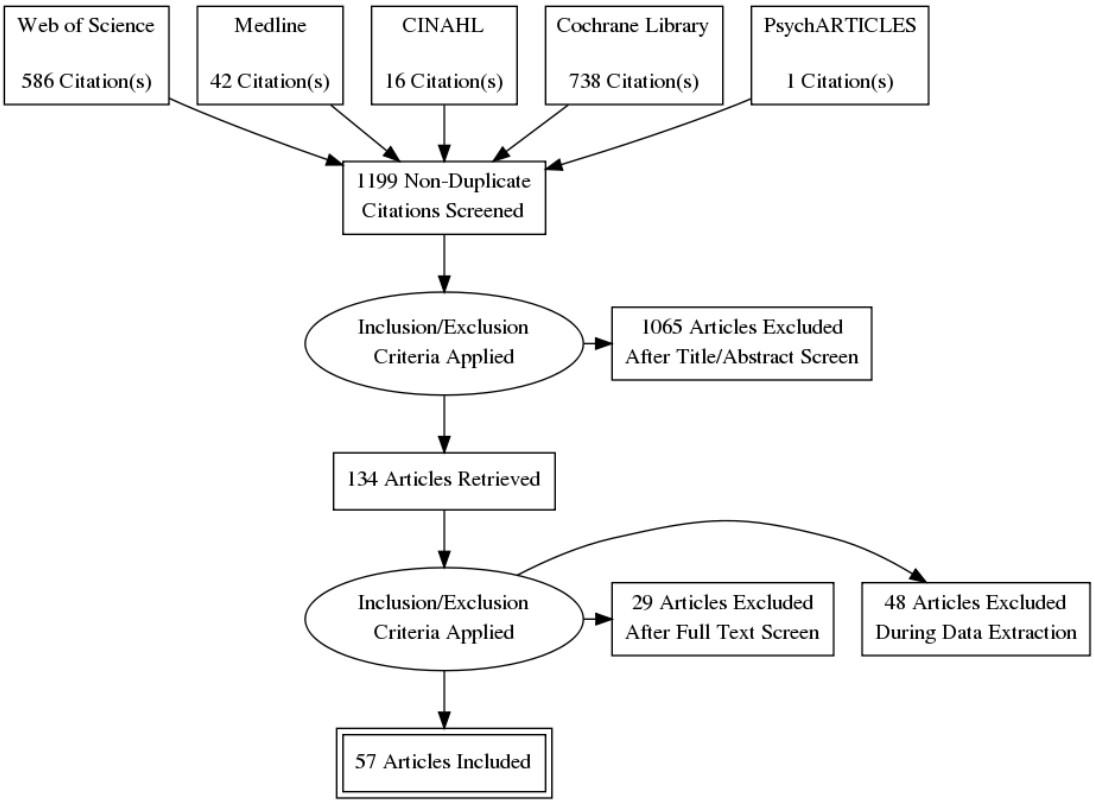


Figure 4.2: The PRISMA flow diagram

4.1.2 Pilot study

The results described in this chapter have been published (Cilar, et al., 2020b) and are reprinted with permission (Appendix P). Before the main study, a pilot study was conducted to examine the psychometric characteristics of the included measures. A survey method was used to collect the data in the pilot study. A six-step protocol to explore psychometric properties for scales was used (Dima, 2018). Firstly, data were checked, and descriptive statistics and visual exploratory analyses were performed. We analysed the item-level descriptives to detect out-of-range values. Secondly, properties of each item were investigated using non-parametric and parametric item response theory. A Mokken scale analysis was used to examine the item homogeneity. Coefficients of homogeneity (H) for items in each subscale were calculated using the aisp (Automatic Item Selection Procedure) function (Hemker, et al., 1995) from the Mokken package (Van der Ark, 2007). Item-based characteristics were checked using the eRm package (Mair & Hatzinger, 2007). The fit of responses and logistic function were

measured. Item fit statistics (infit and outfit) indicated deviation of the model. Recommendation for the mean squares of items cut-off value in both fit statistics are between 0.5 and 1 (Boone & Rogan, 2005). Before conducting the factor analysis (FA), data were checked for adequacy using the Kaiser-Meyer-Olkin measure and Bartlett's test of Sphericity (Cerny & Kaiser, 1977; Child, 1990; Kaiser, 1974). The scale structure was explored using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), reliability via classical test theory, and calculation and description of global scores. Factor analysis was performed using psych (Revelle, 2017) and lavaan packages (Rosseel, 2012). Results from exploratory factor analysis (EFA) were visually inspected by observing the eigenvalues for principal components (PC) and principal axis factor analysis (FA). The following metrics were observed: the root mean square error of approximation (RMSEA) (Steiger, 1990), comparative fit index (CFI) (Bentler, 1990) and Tucker–Lewis index (TLI) (Bentler & Bonett, 1980; Tucker & Lewis, 1973). The parallel analysis (PA) method (Horn, 1965) and the minimum average partial method (Velicer, 1976) were used to interpret the data. Very simple structure was considered as an alternative procedure for estimating the optimal number of factors (Revelle & Rocklin, 1979). Sample size-adjusted Bayesian information criterion was used to select the model method (Sclove, 1987). Classical test theory (CTT) was conducted to test reliability for item sets to display unidimensionality using Cronbach's α, ω, β and Guttman's lambda 6 (G6) (Dima, 2018). Finally, the total scores were computed and summarized.

To assess the scale's reliability and validity, a content validity has been performed. Content validity has been defined as "the degree to which an instrument has an appropriate sample of items for the construct being measured" (Polit & Beck, 2004, p. 423). Quantifying methods for assessing content relevance usually include averaging experts rating of item relevance and using a criterion of acceptability (Beck & Gable, 2001), coefficient alpha (Waltz, et al., 2005), and multi-rater kappa coefficient (Lindell & Brandt, 1999). Nursing researchers often use the content validity index (CVI) to report content validity of the scale (Martuza, 1977; Polit & Beck, 2006). There are two types of content validity indexes – content validity of individual items and content validity of the overall scale. For computing item level CVI, experts were asked to rate each scale item

in terms of its relevance to the underlying construct. Lynn (1986) advised involving at least three experts and no more than ten experts. Thus, five experts from the field of mental health and well-being of adolescents were involved in the evaluation. These items were on a four-point rating scale, where 1 meant not relevant, 2 somewhat relevant, 3 quite relevant, and 4 highly relevant. The total CVI score was computed as the number of experts giving a rating of 3 or 4 divided by the total number of experts. The scale content validity index (S-CVI) is defined as the proportion of items given a rating of quite/very relevant by both raters involved" (Waltz, et al., 2005, p. 155). The kappa coefficient yields an index of the degree of agreement beyond chance agreement (Polit & Beck, 2006; Wynd, et al., 2003). Moreover, the kappa statistic represents a consensus index of inter-rater agreement that adjusts for chance agreement (Polit, et al., 2007).

To calculate the kappa statistic, the probability of chance agreement (Pc) had to be calculated using the following formula: Pc=[N! /A! (N-A)!] * 0.5N, where N represents the number of experts in a panel and A the number of panellists who agree that the item is relevant. The kappa coefficient (κ) was calculated by entering the numerical values of probability of chance agreement (Pc) and item content validity index (I-CVI) in the following formula: κ=(I-CVI - Pc) / (1- Pc) (Polit, et al., 2007).

4.1.3 Quantitative part of the research

In the quantitative part of the research, the survey method was used to collect data, because it gave an insight into the state of adolescents' mental well-being and their opinion on supporting the adolescents' mental well-being by family, friends, teachers, and RNs. Data analysis involved the use of descriptive and inferential statistics (Polit & Beck, 2017). Only fully completed questionnaires were included in the data analyses. Questionnaires, where more than 50.0% of data was missing were removed from further analysis. In other cases where less than 50.0% of data was missing, data was imputed. The missForest function was used to impute missing values. The function uses a random forest trained on observed values of a data matrix to predict the missing values (Stekhoven, 2016).

Once again, psychometric testing of both scales was performed to ensure validity of instruments in measuring adolescents' mental well-being and social support. Psychometric testing was performed following the six-step protocol proposed by Dima (2018) as described in the pilot study. The first and second hypothesis were tested according to the distribution of data using Student's t-test of independent samples or the non-parametric alternative (Mann-Whitney U test). The third hypothesis, mental well-being in relation to age, was tested by a correlation test (Pearson or Spearman coefficient depending on the distribution of the data) and mental well-being in relation to the gender with the Student's t-test of independent samples or the Mann-Whitney U test. Demographic data were also tested to see if there is a correlation or impact of them on the adolescents' mental well-being. Adolescents' mental well-being was tested with student age (correlation test), gender (Student t-test), living environment (Mann-Whitney U test), living region (Kruskal Wallis test) and school programme (Kruskal Wallis test). All test results are reported following guidelines for reporting statistical data. The results were analysed using the R programming language for statistical analysis and presented using graphs, tables, and figures. The interpretation of the results was conducted by setting the level of statistical significance to $\alpha = 0.05$ (Žnidaršič, 2013). Also, descriptive data was tested in correlation with adolescents' mental well-being. Based on the type and number of answers for a particular question and data distribution, the test was chosen. For example, when testing adolescents' mental well-being and adolescents age the correlation test was chosen. On the other hand, when testing adolescents' mental well-being and type of school (primary or secondary), the t-test was used.

Estimation of a sparse inverse covariance matrix was performed using a lasso penalty (Friedman, et al., 2019). An open-ended question was analysed using a Linear Dirichlet Allocation (LDA). LDA is a so-called state-of-the-art method in the field of topic modeling to cluster text documents (Pietsch & Lessmann, 2018). It was developed in 2003 by Blei, et al. (2003). LDA is a three-level hierarchical Bayesian model that aims to detect the most frequent topics. Each document dm is modeled as a finite mixture over a set of K corpus-wide topics zk (Blei, et al., 2003). Each topic is a distribution over a fixed set of V

words wv. LDA assumes that the words in a document are generated by latent topics. Topics are generated by using the word co-occurrence pattern withdrawn from the document term matrix (DTM). This process is described in three steps (Blei, et al., 2003):

1. For each topic z, choose the probabilities over words φz ~ Dir(β), where φz is drawn from a symmetric Dirichlet prior distribution with parameter β.
2. For each document (d), choose the probabilities over topics θd ~ Dir(α), where θd is drawn from a symmetric Dirichlet prior distribution with parameter α.
3. For each word wdn in document d, choose a topic zdn ~ Multinomial(θd) and then choose a word wdn from the multinomial distribution wdn ~ Multinomial(φzdn).

The data processing involved removal of potentially problematic symbols (e.g., -, ‘, •, \), punctations, stop words (e.g., can, say, none, don’t), whitespaces, and transformation to lower case. The number of topics (k) and the Dirichlet hyperparameters α and β were determined prior to modelling. The parameter α indicates the prior document topic distribution and the parameter β the prior topic word distribution. The posterior distributions of θd, φz and z are deduced by using Gibbs sampling (Pietsch & Lessmann, 2018).

As the emphasis in LDA is on topic modeling and not word meaning, there is no guarantee that the word vectors are sensible as points in a k-dimensional space (Mass, et al., 2011), thus semantic analysis (or so-called opinion mining) was conducted as well. Sentiment analysis is defined as “the task of finding the opinions of authors about specific entities” (Feldman, 2013). An RQODA package (Huang, 2014) was used to perform this analysis.

4.1.4 Qualitative part of the research

The grounded theory method (GTM) was used, which aims to create a grounded theory based on evidence to gain new knowledge and findings (Corbin & Strauss, 2008). The GTM is a systematic method that consists of categories and assumptions about their inter-relationships (Chenitz & Swanson, 1986). GTM emphasizes the importance of constant comparison to find patterns, an interactive approach to data collection and

data analysis, and theoretical sampling (Corbin & Strauss, 2008). It supports existing research in the field of prevention and promotion of mental health of adolescents (Poulakka, et al., 2014). Corbin & Strauss (2015) discourage using theoretical frameworks in GTM explaining that the whole purpose of using GTM is to construct a new theory. However, they allow using a theoretical framework if an alternative explanation is offered. They also add that a theoretical framework can be used if researchers develop new concepts or upgrade existing ones. As Goldkuhl & Cronholm (2010) wrote "If one ignores existing theory, there is a risk of reinventing the wheel." They encourage the usage of existing theory as theory can be used as a building block that supports the empirical data forming the new emergent theory. It is sometimes necessary to develop the formal theory from the substantive theory. Thus, the theory of interpersonal relations by Peplau (1952) was used to shape this research's aims, to choose appropriate instruments and to interpret the results.

Steps by Corbin & Strauss (2008) were followed in developing the grounded theory: theoretical sampling, data collection and analysis, open coding, constant comparison, axial coding, selective coding, and integration. Sampling, collection, and analysis of data using the GTM takes place in constant interaction and includes a comparative analysis. For data collection, we selected focus groups method in the form of interviews with selected participants, to get a broader insight into the perception of adolescents', parents, teachers, RNs, and legislators on adolescent mental well-being in relation to their social support. The qualitative part of the research included work with focus groups, namely interviews with groups of adolescents, parents, teachers, RNs, and legislators. The process of conducting focus groups followed five steps: planning, participants sampling and recruitment, conduction of focus group meetings, data analysis, and reporting (Corbin & Strauss, 2008; Klemenčič & Hlebec, 2007). We collected data using focus group semi-structured interviews and analysed by the steps proposed by Corbin & Strauss (2008). Line by line coding, open coding, axial coding, and theoretical coding was used to develop theoretical propositions and the central (core) category. The outcome is a full conceptual description (verification) (Corbin & Strauss, 2008).

The accuracy of the research was ensured by considering four criteria proposed by Guba & Lincoln (1989), namely credibility, transferability, dependability, and confirmability (Guba & Lincoln, 1989). The credibility of the study describes the confidence in the truth of the study and the findings. It refers to the internal validity, i.e., whether the researcher presents the researched phenomenon as seen by the participants in the research. The latter was strengthened by transcribing the recorded interviews without adding or removing text. Credibility was also ensured by involving another researcher (supervisor) in the process of data analysis. Transferability refers to the degree to which the results can be generalized or transferred to other contexts. The researcher can enhance transferability and show that findings have applicability in other contexts by describing the research context and assumptions (Guba & Lincoln, 1989). Transferability refers to the external validity and applicability of results outside the context of the research environment, so that the results are also useful for those not included in the research. The latter was achieved with a detailed presentation and description of the results, and interviews with participants in five focus groups. Dependability of the results shows that the findings are consistent over time (Guba & Lincoln, 1989). Research steps taken from the start of a research to the development and reporting of the findings are transparently described. Confirmability refers to the degree to which the results could be repeated. The possibility of confirmation refers to the objectivity that we ensured by achieving the criteria of credibility, consistency and transferability as well as by including another researcher (supervisor) in the research (Guba & Lincoln, 1989).

4.2 Research environment and sample

Research sample and sampling method are important components of every type of research. They need to be carefully planned and implemented (Gray & Grove, 2021). In the following chapter, the research sample involved in pilot study, quantitative part of the research, and qualitative part of the research are described.

4.2.1 Pilot study

Before the main study, a pilot study was conducted to test the psychometric properties of the included measurements. Polit & Beck (2017) suggest that number of participants

in the pilot study can be determined by multiplying the number of items by 10. Thus, the expected number of respondents for the pilot study was 140, half of which primary and half secondary school students. To assess item and scale validity of the WEMWBS scale, five experts from the field of adolescents' mental health and well-being were invited to participate in the study. Inclusion criteria were work with adolescents in the clinical environment, work in the field of mental health and mental well-being, work in an educational institution, and clinical experiences with working with adolescents.

4.2.2 Quantitative part of the research

The main criterion for inclusion in the quantitative part of the study was the adolescent age between 10 and 19 (WHO, 2014a). The population was selected based on the systematic review, analysis, and synthesis of the literature. Adolescents are a group of the population regularly exposed to stress factors, often leading to imbalances in mental health. Early detection of mental health problems in adolescents is important since it can prevent the development of severe mental problems in adulthood. It is also important to determine how parents understand support for the mental health and well-being of adolescents. As evident from previous work described in the Problem definition section, support from family, friends, peers, RNs, and teachers is of great importance to maintain adolescent's mental well-being. Based on the wishes, needs, and knowledge of adolescents and parents, appropriate action can be taken and the mental well-being of adolescents improved. According to the Statistical Office of the Republic of Slovenia (slo. Statistični urad Republike Slovenije [SURS], 2018) and the Ministry of Education, Science and Sport of the Republic of Slovenia (2018) there were 454 elementary and 182 secondary schools in Slovenia at the time of research planning. Random sampling based on which the expected sample included all available students from 22 primary schools (5.0% of all elementary schools) and 12 secondary schools (5.0% of all secondary schools) in Slovenia was used. Random sampling was chosen to represent student characteristics in the wider student population. Because students are chosen at random, everyone in the large population set has the same probability of being selected. Random sampling was performed using a computer program. The foreseen sample was calculated based on data from the Statistical Office of the Republic

of Slovenia (2017), where it is evident that there were 176 898 enrolled students in elementary school and 74 021 in secondary school in the school year 2016/2017. The envisaged final number of participants involved was determined by the size of the total population of students, degree of confidence, and margin of error (Qualtrics, 2018), which amounted to 384 students. The sample size was increased to avoid the risk of attrition and dropout during the study. Students who are under 10 years old and above 19 years old and those who are not included in the education system were excluded. Survey questionnaires were distributed to 3 860 students in primary and 3 107 students from secondary schools who consent to participation in the classroom where the classes took place. The research involved primary school (from the 5th to the 9th grade) and secondary school students (from the 1st to the 4th grade). The ethical permission from the Slovenian National Medical Ethics Committee (Appendix L) and the consent of the school or principals was obtained to carry out the research. Before the research consent from parents was also sought.

4.2.3 Qualitative part of the research

In the qualitative part of the research, theoretical sampling was used to gain a broad view of the studied concept of interest groups. Theoretical sampling is usually used in GTM to advance development of a selected theory thought research process (Gray & Grove, 2021; Strauss & Corbin, 1998). Strauss & Corbin (1998, p. 201) described theoretical sampling as “maximise opportunities to discover variations among concepts and to densify categories in terms of their properties and dimensions.” Theoretical sampling is always purpose driven. Thus, the sample was selected based on the knowledge of adolescents’ mental well-being to get the most usable information about adolescents’ mental well-being in correlation with social support. Primary and secondary schools which were involved in the quantitative part of the study, were asked for participation in the qualitative part of the study. Samples in focus group interviews with primary school students, secondary school students, teachers, and parents were chosen by school principals. Samples in focus group interviews with RNs were chosen based on the conversation with the assistant director of nursing in healthcare centre. Samples in focus group with legislators was chosen based on recommendation of the

supervisor. The recommended focus group size is six to ten participants (Klemenčič & Hlebec, 2007), so we assigned eight participants to each focus group. Focus groups were conducted among sixteen adolescents (eight primary school students and eight secondary school students), eight parents, six teachers, six RNs, and three legislators who gave consent to participate in the survey. Adolescents were individuals between 10 and 19 years of age (WHO, 2014a). Parents of children aged between 10 and 19 were also involved, as well as teachers in primary and secondary schools. RNs and legislators were also involved. Representatives from the Ministry of Health of the Republic of Slovenia, the Chamber of Nursing and Midwifery of Slovenia, and representatives of the Extended Advisory Board for Nursing care with the Ministry of Health were involved. Recruitment in focus groups was based on the theoretical sampling. There were only three legislators who agreed to participated in the focus group. Nevertheless, we think that the discussion with them gave us a significant view about their perception of adolescents' mental well-being, thus, their discussion was also included in the data analysis. Focus groups were organized in educational and work institutions, or in places agreed with participants.

4.3 Research instruments

Research instruments are measurement tools designed to collect data on a topic of interest or to measure chosen phenomena (Polit & Beck, 2017).

4.3.1 Quantitative part of the research

In the pilot and main study, the same questionnaire was used (Appendix A). The questionnaire consisted of four sets of questions: social support (KIDSCREEN-27), mental well-being (WEMWBS), support from healthcare and nursing, and demographic questions. Psychometric testing was performed to assess if chosen questionnaires are valid for the population of adolescents. Also, a form of voluntary and conscious consent was collected prior to data collection (sample of the parental consent is presented in Appendix F).

KIDSCREEN-27

The KIDSCREEN project aimed to develop quality of life questionnaires for healthy and chronically ill children and adolescents. The generic KIDSCREEN questionnaire is available in three versions; the original long version consists of 52 items covering ten dimensions of QoL, a 27-item version covering five dimensions of QoL, and a 10-item index version (Ravens-Sieberer, et al., 2014) (Figure 4.3). In the HBSC study, a 10-item version of the KIDSCREEN questionnaire was used in Slovenia (Jeriček Klanšček, et al., 2011).

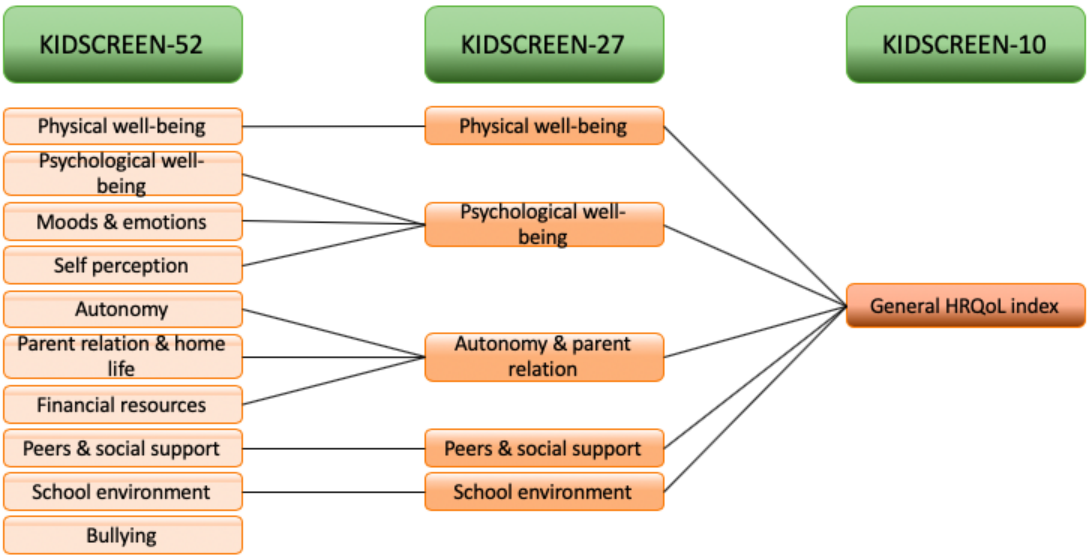


Figure 4.3: Dimensions of three versions of the KIDSCREEN instrument (Ravens-Sieberer, et al., 2014, p. 795)

The KIDSCREEN-27 measures physical well-being, mental well-being, autonomy, parental relationships, support and peer support, and the school environment. The questionnaire was developed under the KIDSCREEN-27 project, which was conducted from 2001 to 2004 and was funded by the European Commission (Child Public Health, 2011; Ravens-Sieberer, et al., 2007). It consists of five segments: physical activity and health, general well-being, and emotions about oneself, family and leisure, friends, school, and learning. Each item was scored on a five-point Likert scale ranging from 1 meaning “not at all” to 5 meaning “very much”. The questionnaire was validated and used in different countries and settings (Andersen, et al., 2015; Baydur, et al., 2016; Farias Júnior, et al., 2017; Quintero, et al., 2011; Molina, et al., 2014; Nezu, et al., 2016;

Ng, et al., 2015; Pardo-Guijarro, et al., 2013; Parizi, et al., 2014; Power, et al., 2019; Ravens-Sieberer, et al., 2007, 2010; Robitail, et al., 2007; Shannon, et al., 2017; Stevanovic, et al., 2013; Velez, et al., 2016; Vrkić, 2018). The KIDSCREEN-27 was validated in a pilot study among adolescents attending primary and secondary schools in Slovenia using a six-step analysis (descriptive statistics, Mokken scale analysis, parametric item response theory, factor analysis, classical test theory, and total subscale scores) analysis of the psychometric properties of the scale (Dima, 2018). It showed good psychometric properties and is suitable for use among adolescents in Slovenia to obtain more information about social support.

WEMWBS

The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) questionnaire was developed in Scotland in 2006. It was validated for the population of adolescents in other countries (Clarke, et al., 2011; Ringdal, et al., 2018). The WEMWBS was validated for different populations in different settings (Bartram, et al., 2011, 2013; Bass, et al., 2016; Castellvi, et al., 2014; Clarke, et al., 2011; Dong, et al., 2016; Fung, 2019; Haver, et al., 2015; Hoffman, et al., 2019; Hughton, et al., 2017; Ikink, 2012; Kim, et al., 2014; Lang & Bachinger, 2017; Lloyd & Devine, 2012; Lopez, et al., 2013; Santos, et al., 2015; Singh & Raina, 2020; Smith, et al., 2017, 2018; Stewart-Brown, et al., 2009; Taggart, et al., 2013; Trousselard, et al., 2016; Waqas, et al., 2015). The questionnaire includes 14 items and measures positive mental health and mental well-being over the past two weeks. When choosing the answers, a five-point Likert scale is offered and ranges from “none of the time” to “all of the time”. This study was registered on the official website before the usage of the questionnaire. A translated questionnaire was used (Cilar, 2017), which followed the authors' guidelines for the translation process of the questionnaire. A sum of all answers gives a total WEMWBS score, which can be interpreted as poor (scores between 14 and 41), moderate (scores between 42 and 59), and excellent (scores above 60). The minimum score can be 14 and a maximum of 70 (Wright & McKeown, 2018).

The questionnaire was validated in a pilot study following the above-mentioned six-step analysis by Dima (2018). The Slovenian version of the WEMWBS achieved good validity and reliability in a sample of nursing students and can be recommended for future usage

(Cilar, et al., 2020b). Results of psychometric testing are presented in the Results section. Also, results of the quantitative part of the research were basis for developing questions in semi-structured interviews for conducting focus groups. The following chapted describes these semi-structured interviews in detail.

4.3.2 Qualitative part of the research

In the qualitative part of the research semi-structured interview guides for conducting focus groups were developed after the quantitative part of the research was conducted and data were analysed to get in depth insight and expand the understanding of adolescent's mental well-being and social support. Each interview guide consisted of questions related to the results of the quantitative part of the research. Interview guides were developed considering results from the quantitative part of the research, principles of GTM and the theory of interpersonal relations (Peplau, 1952). The interview guide for adolescents (Appendix G) consisted of six questions related to their interpersonal relations with family, friends, and teachers; RNs role in providing adolescents mental well-being; as well as their understanding of the adolescents mental well-being. The interview guide for parents (Appendix H) consisted of six questions. Based on the results of the quantitative part of the research, parents were asked to evaluate adolescents' mental health and well-being. They were also asked about their opinion on received support for adolescents by the health system and how the health system could be involved in the prevention of mental health problems and promotion of adolescent mental health. Moreover, parents were asked about their opinion on receiving preventive activities to support the mental well-being of adolescents. Another question was directed to adolescents mental well-being support from the educational institution and to parents suggestions for improving adolescents mental well-being. The interview guide for teachers (Appendix I) consisted of seven questions. Teachers were asked about their opinion on the meaning of adolescents' mental well-being, people who can ensure (influence) the mental well-being of adolescents, and the impact of relationships with parents, friends and teachers on the mental well-being of adolescents. Furthermore, they were asked about their opinion on RNs role in maintaining adolescents' mental well-being and the possible role of legislators. They

were asked about suggestions for improvement. RNs were asked six questions (Appendix J) related to their opinion on the meaning of adolescents' mental well-being, people who influence adolescents mental well-being, how can teachers, parents and RNs infulence adolescents mental well-being, if RNs have enough knowledge or competencies to maintain or improve the mental well-being of adolescents and about their opinion on what could be done to ensure better mental well-being. Finally, four questions were developed for the interview guide for focus groups with legislators (Appendix K). Similar to RNs, legislators were asked about their opinion on the meaning of adolescents mental well-being in correlation with social support, how can RNs and legislators infulence adolescents mental well-being, if RNs have enough knowledge or competencies to maintain or improve the mental well-being of adolescents, and about their opinion on what could be done to ensure better mental well-being.

4.4 Data collection procedures

Data collection in the quantitative part of the research took place in the second half of 2019. A validated questionnaire KIDSCREEN-27 (Ravens-Sieberer, et al., 2005) was used to collect information on the perception of adolescents on support from family, friends, RNs and teachers. Certain items (1, 9, 10 and 11) were reversed when scoring the questionnaire. The total KIDSCREEN score was calculated by summing up all the responses. Higher scores of KIDSCREEN indicated better QoL. The WEMWBS questionnaire (Taggart, et al., 2015) was used to determine the degree of mental well-being of adolescents. Study participants completed the two additional parts - Healthcare and Demographic Data, which we have designed. Additional parts were added to explore sociodemographic variables in correlation with adolescents' mental well-being. Before using both questionnaires, authors were asked for permission. After obtaining permission to use KIDSCREEN-27 and WEMWBS questionnaires, we translated them into the Slovenian language. The translation was performed in four steps. First, two experts independently translated the English version of the questionnaire into the Slovenian language. Translations were reviewed, aligned, and formatted in one questionnaire. A back-translation (from Slovenian to English) was made by an expert in the English language. This translation was compared with the original version and finalized; then

the questionnaire was agreed upon. Before conducting the research itself, we conducted a pilot study and carried out the calculation of the psychometric properties of the questionnaires. Reliability was determined by the method of internal consistency (Cronbach alpha). We also checked the validity of the questionnaire (factor analysis). For the WEMWBS questionnaire, Cronbach α was 0.925 in the Slovenian student population in 2017 (Cilar, 2017), which represents an excellent degree of consistency (Goforth, 2015). After gaining ethical permission and the permission from school principals, we met with chosen teachers who helped us in data collection. Printed informal consents, sheets with additional information, and questionnaire were delivered to each school. After collecting the informal consents, teachers distributed questionnaires. The adolescents completed the questionnaires in a written (printed) version. The completion of the questionnaires lasted about 15-20 minutes. The results of the quantitative part of the research were analysed using the programming language for statistical analysis R v 3.6.1. (R Development Core Team, 2005) thus ensuring the reproducibility of the research that is often overlooked in nursing research.

In the qualitative part of the research, we used the guide for a semi-structured interview with focus groups for collecting the data (Krueger & Casey, 2014). Focus group interviews with primary (PS) and secondary school students (SS), parents (P), teachers (T), RNs (RN), and legislators (L) were conducted. We conducted interviews with one focus group per week, as the grounded theory method requires that sampling, data collection and data analysis take place simultaneously and involve continuous comparative analysis. Exceptions were made in focus groups with primary school students which were followed by interviews with parents and teachers on the same day due to convenience. Firstly, focus groups with primary school students, parents of primary school students and teachers in primary schools were conducted followed by focus groups with secondary school students. Each interview of each focus group was listened to and transcribed. After that, interviews were analysed. Then, focus group with RNs was conducted. Interview was transcribed and analysed shortly after data collection. Finally, the focus group with legislators was conducted, and the interview transcribed and analysed. Date and place of the focus groups were chosen in

collaboration with participants. Focus groups with adolescents, parents, and teachers were performed in schools after obtaining principals' permission. We sent additional information and a consent form to the participants. In adolescents, younger than 16 years, parents completed the consent form. Focus group with RNs was performed in the one health care centre in Slovenia. RNs received an additional information form before the focus group meeting. Focus group with legislators was performed online using MS Teams, because of the inability to find common most suitable date and place to conduct focus group. Also, legislators received an additional information form before the focus group meeting. Data collection lasted from September to November 2020 in selected primary and secondary schools in Slovenia. Each interview with a focus group lasted 60 minutes. The audio recording of the interviews was performed with the prior approval of the institutions and the consent of the participants. The recordings are appropriate, especially in the youth population, as it is possible to capture verbal communication (Streubert & Carpenter, 2011), which is an important factor in interpersonal relationships (Peplau, 1991). Moreover, interviews were recorded in as much detail as possible. Field notes and memos were created to recall all impressions of the participants, environment and behaviours. The obtained data were analysed following the steps proposed by Corbin & Strauss (2008). Constant comparison was conducted to identify patterns. There was a constant relation between data collection and data analysis. Line by line coding, open coding, axial coding, and theoretical coding was used to develop theoretical propositions and the central (core) category. In the framework of open coding, a list of codes was obtained, which was grouped into subcategories by analysing line after line of each interview and the procedures of parsing, reviewing, comparing, conceptualizing, and categorizing the data. The codes were generated based on multiple readings of the transcripts. Moreover, data were combined using axial coding by establishing connections between codes and subcategories. In the axial coding phase, an analytical strategy of organizing subcategories and categories called a paradigm was used that includes three main characteristics: causal conditions, action-interaction (phenomenon), and outcomes or consequences. As part of the optional coding, the main category was identified and selected. Based on the analytical strategy,

the result of the analysis was a conceptual description. In the analysis, notes (memos) were used, which served to monitor the coding process. The notes were created on an ongoing basis, namely in the open coding phase for individual codes which were then used in the creation of subcategories and categories in the axial coding phase. In the initial coding phase, field notes of interviews were used, which means that the observations of the course of the focus group interviews were recorded (Corbin & Strauss, 2008).

The process of the development of the model followed the proposed steps. The concept was developed in the following steps: data reduction, selective sampling of the literature and data, and developing the core variable (Stern, 1980). The concept development is presented in the Results chapter. The core variable is the theoretical category with the most explanatory power (Glaser & Strauss, 1967). In this study, it is the interpersonal relationship which is the basic concept of the proposed model. A concept is the basic unit of theory. Moreover, theory comprises concepts, their definitions, and relational statements.

4.5 Ethical aspects

Before carrying out the pilot research study, ethical approval was obtained from the Institutional Committee for Ethical Questions at the Faculty of Health Sciences University of Maribor (no. 038/2019/886-2/504). Before conducting the main research (both quantitative and qualitative part), ethical approval was also obtained from the Slovenian National Medical Ethics Committee (no. 0120-313/2019/13) (Appendix J). To enter the research environment, approval from the school principals was obtained. Participants invited to the study were informed orally and in written form about the purpose of the research, instructions for compliance, confidentiality, anonymity, and volunteering, as well as the possibility of withdrawing from participation in any research phase (Royal College of Nursing [RCN], 2009). They were informed about the fact that the obtained results will be used exclusively for the purpose of the research. The author adhered to the principles of the Helsinki Declaration on Biomedical Research in Human Beings (World Medical Association [WMA], 2013), the Oviedo Convention (Council of

Europe, 1997), the Convention on the Rights of the Child (United Nations General Assembly, 1989), the Personal Data Protection Act (Slo. Zakon o varstvu osebnih podatkov [ZVOP-1]), *Regulation (EU) 2016/679 of the European Parliament and of the Council* and the principles of the *Code of Medical Deontology of Slovenia* (1992). Ethical principles of the *Code of ethics in nursing and healthcare of Slovenia* (2014) were also considered and applied. Adolescents needed additional parental consent to participate in the study (Harris & Porcellato, 2018). Additional information about the study were provided for students and parents. The contact information was also provided; thus, parent did have an opportunity to ask additional questions about the study. Both students younger than 16 years and parents signed the consent form. We store the consents to participate in the survey, survey questionnaires, recordings, and transcripts of focus group interviews in locked rooms (RCN, 2009). All documents will be stored until data analyses are performed and results are interpreted and disseminated. The results are presented in the doctoral dissertation and corresponding articles, considering ethical principles and the principles of publishing articles.

Risks and burdens for participants in the survey were minimal. There was a possibility of discomfort of individuals since mental well-being is still a topic that is not extensively talked about and mental disorders abroad and in the Slovenian environment are still stigmatized. However, there is a great advantage of the proposed research, namely the acquisition of insight into the state of mental well-being of adolescents in connection with the support of family, friends, RNs, and teachers. Based on the obtained results, improvements in the prevention of mental disorders and promotion of mental health and well-being are suggested.

4.6 Assumptions and limitations of the study

Based on the initial analysis of the literature, the following assumptions and limitations were identified:

- There is a relation between supporting nursing, family, friends, and teachers, and the mental well-being of adolescents.

- The selected questionnaires are appropriate for the subject matter and will help us answer the research questions we have set.
- We will be able to achieve a response rate that will result in the number of participants involved in the survey of sufficient size to allow generalization of the results.
- A potential constraint is present in the focus group of legislators, as it is particularly difficult to predict the responsiveness of those invited to this group.

Listed assumptions and potential limitations were stated before undertaking the research. Limitations of the study are discussed in the Discussion section.

5 Results

The results of qualitative and quantitative data analysis are presented by the student. In quantitative data analysis, the student presents them in the form of graphs, tables or figures and interprets them, without duplicating the data, for example in a table and text. Sets of results must be meaningfully integrated into a whole.

In the following chapter, results from the pilot study and the main study are presented. Scale's validations are presented in the pilot study and main study subsection. Validations were conducted on results from the pilot study and main study. Results from the main study are divided into two parts: the quantitative part of the research and the qualitative part of the research. Integration of the results is described in the discussion section.

5.1 Pilot study

The results described in this chapter have been published (Cilar, et al., 2020b) and are reprinted with permission (Appendix P). Before the pilot study, the principals of schools were contacted and permission to perform the research was sought. A study was conducted in one primary school and one secondary school in Slovenia in July 2019. Adolescents between 10 and 19 years were invited to participate in the study. A total of 57 (41.6%) adolescents from primary and 80 (58.4%) from secondary school participated in the survey. The study consisted of adolescents from 6^{th} to 9^{th} grade in primary and from 1^{st} to 4^{th} grade in secondary school. Adolescents were between 11 and 19 years old. Other sample characteristics are shown in table 5.1.

Table 5.1: Sample characteristics in the pilot study

	PS (*n* = 57)	**SS (*n* = 80)**
	M (SD)	***M (SD)***
Age	13.09 (1.47)	16.72 (1.17)
Gender	***n (%)***	***n (%)***
Female	36 (65.3%)	55 (69.6%)
Male	19 (34.5%)	24 (30.4%)
School year	***n (%)***	***n (%)***
1st	0 (0.0%)	23 (29.5%)
2nd	0 (0.0%)	19 (24.4%)
3rd	0 (0.0%)	16 (20.5%)
4th	0 (0.0%)	20 (25.6%)
5th	0 (0.0%)	0 (0.0%)
6th	56 (98.25%)	0 (0.0%)
7th	0 (0.0%)	0 (0.0%)
8th	0 (0.0%)	0 (0.0%)
9th	0 (0.0%)	0 (0.0%)
Living environment		
With mother	54 (96.4%)	79 (98.8%)
With father	44 (78.6%)	66 (82.5%)
With sister/brother	38 (67.9%)	57 (71.3%)
With grandmother	10 (17.9%)	13 (16.3%)
With grandfather	4 (7.1%)	6 (7.5%)
Other	6 (10.7%)	2 (2.5%)
Living region		
Pomurska	1 (5.7%)	3 (3.8%)
Podravska	46 (86.8%)	70 (87.5%)
Koroška	0 (0.0%)	4 (5.0%)
Savinjska	0 (0.0%)	1 (1.3%)
Zasavska	0 (0.0%)	0 (0.0%)
Srednjeposavska	0 (0.0%)	0 (0.0%)
Gorenjska	3 (5.7%)	0 (0.0%)

	PS (*n* = 57)	SS (*n* = 80)
Osrednjeslovenska	0 (0.0%)	0 (0.0%)
Jugovzhodna	0 (0.0%)	2 (2.5%)
Goriška	1 (1.8%)	0 (0.0%)
Notranjsko-kraška	0 (0.0%)	0 (0.0%)
Obalno-kraška	0 (0.0%)	0 (0.0%)
School programme		
General	0 (0.0%)	0 (0.0%)
Medical	0 (0.0%)	77 (96.3%)
Touristic	0 (0.0%)	0 (0.0%)
Educational	0 (0.0%)	0 (0.0%)
Computer sciences	0 (0.0%)	0 (0.0%)
Chemistry	0 (0.0%)	0 (0.0%)
Other	0 (0.0%)	0 (0.0%)

PS = primary school students; SS = secondary school students; n=participants; %=percent.

A six-step psychometrics analysis was conducted for both questionnaires following recommendations by Dima (2018).

Step 1: descriptive statistics

Firstly, response frequencies were checked for all items of KIDSCREEN-27 to show if items have sufficient variation among respondents. The minimum score for KIDSCREEN-27 was 48 and a maximum of 130. The minimum score of WEMWBS was 22 and a maximum of 70. Mean value was 51.40 (*SD* = 8.72).

Secondly, inter-item correlations of KIDSCREEN-27 and WEMWBS were calculated to examine the extent to which scores on one item are related to scores on other items in a scale (Figure 5.1 and Figure 5.2).

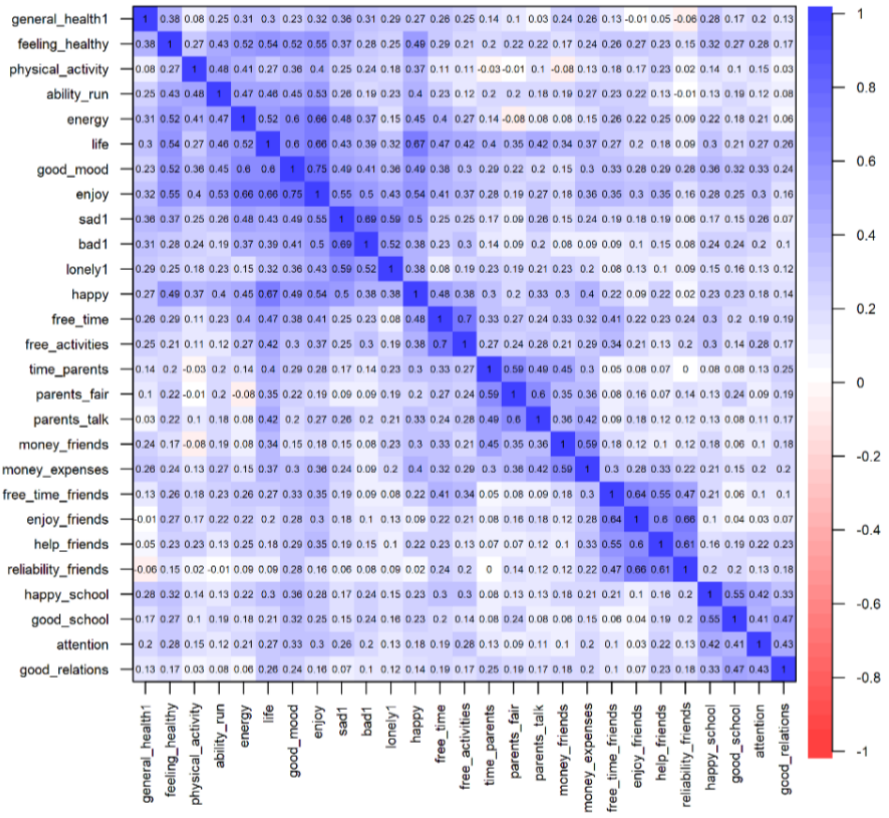


Figure 5.1:Correlation between KIDSCREEN-27 items

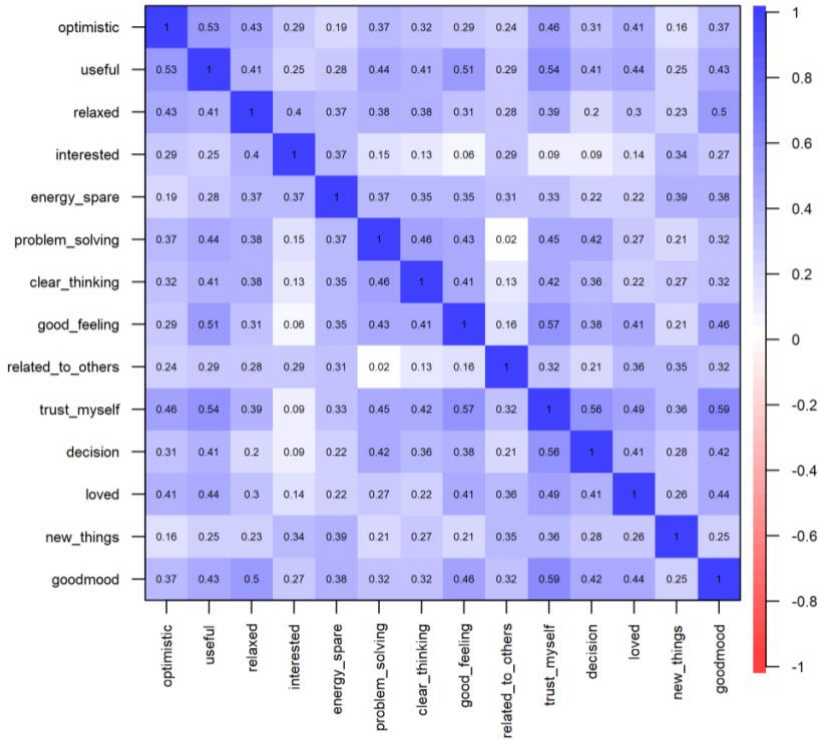


Figure 5.2: Correlation between WEMWBS items

Step 2: Mokken scale analysis

The KIDSCREEN-27 scale is homogeneous ($H \geq 0.30$) for all subscales (Table 5.2).

Table 5.2: Homogeneity coefficients for subscales of KIDSCREEN-27

Scale	*H (se)*
Physical well-being	0.387 (0.046)
Psychological well-being	0.514 (0.041)
Autonomy and parent relation	0.371 (0.040)
Peers and social support	0.692 (0.053)
School environment	0.496 (0.053)

H=homogeneity coefficient; se=standard errors.

All items in KIDSCREEN-27 form a single scale at different homogeneity levels. The subscale physical well-being is unidimensional at the homogeneity level of 0.25, psychological well-being at 0.40, autonomy and parent relation at 0.30, peers and social support at 0.55, and school environment at 0.45. As the physical well-being subscale does not form a unidimensional scale at $H \geq 0.30$, the results of the Mokken scale analysis (MSA) might suggest the exclusion of certain items from the subscale. More specifically, a question on general health in the physical well-being subscale was not selected on any subscale by MSA (Appendix M). The WEMWBS homogeneity coefficient was 0.366 (*se* = 0.040).

Step 3: parametric item response theory (IRT)

Further, scales fit diagnose was performed with the Rating scale model. Item *infit* and *outfit* values present the extent to which responses fit the logistic function for a particular item (Table 5.3).

Table 5.3: The mean square of item fit values

Scale	Infit		Outfit	
	min	max	min	max
Physical well-being	0.576	1.084	0.603	1.087
Psychological well-being	0.561	1.408	0.560	1.314
Autonomy and parent relation	0.775	1.066	0.735	1.047
Peers and social support	0.586	0.896	0.585	0.920
School environment	0.600	0.876	0.598	0.909
WEMWBS	0.556	1.359	0.611	1.338

KIDSCREEN-27 subscales have range of *infit* between 0.561 and 1.408, and *outfit* between 0.560 and 1.314. Values are acceptable and do support usage of the scale.

Step 4: factor analysis

Parallel analysis based on tetrachoric correlations suggested six factors and four components for the KIDSCREEN-27 scale (Figure 5.3). VSS analysis finds the optimal number of factors by considering increasing levels of complexity. The VSS plot displays the fit results for each complexity where the optimal number is represented by the highest value of complexity one (Revelle & Rocklin, 1979). Our results from the VSS analysis point at the optimal number of two factors, but both, Velicer MAP and SABIC, suggest a five factor structure.

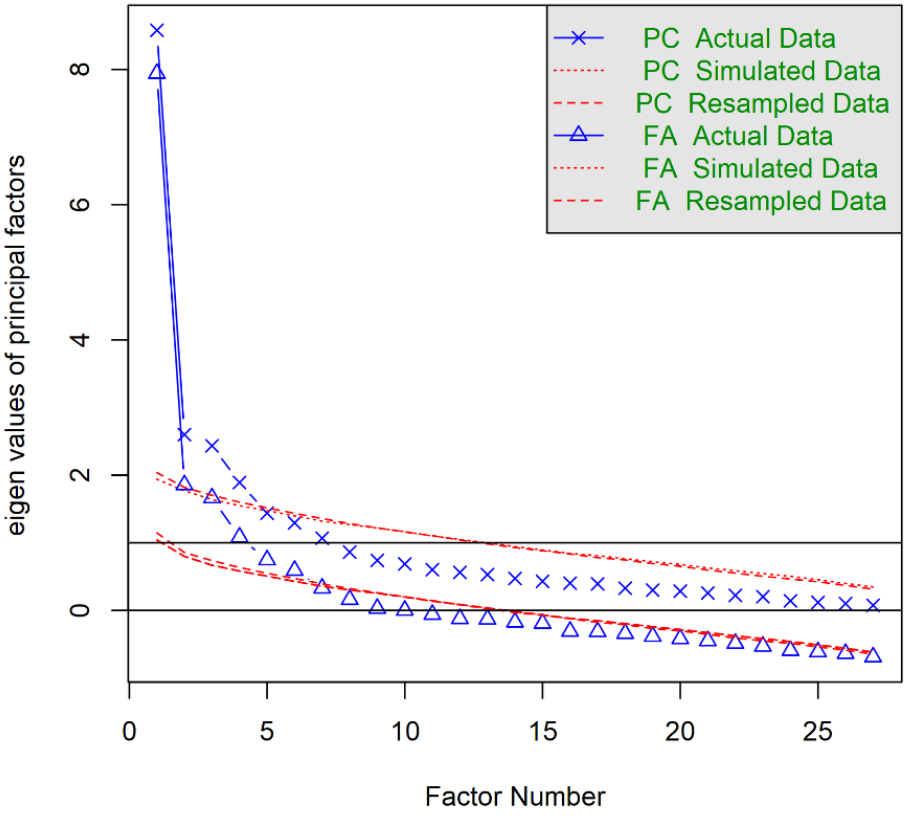


Figure 5.3: Parallel analysis scree plot for KIDSCREEN-27

The Confirmatory Factor Analysis (CFA) showed poor fit according to user model versus baseline model metrics (*CFI* = 0.758; *TLI* = 0.730) and good fit in root mean square error-based metric (*RMSEA* = 0.098; $p(\chi^2) < 0.001$) (Figure 5.4).

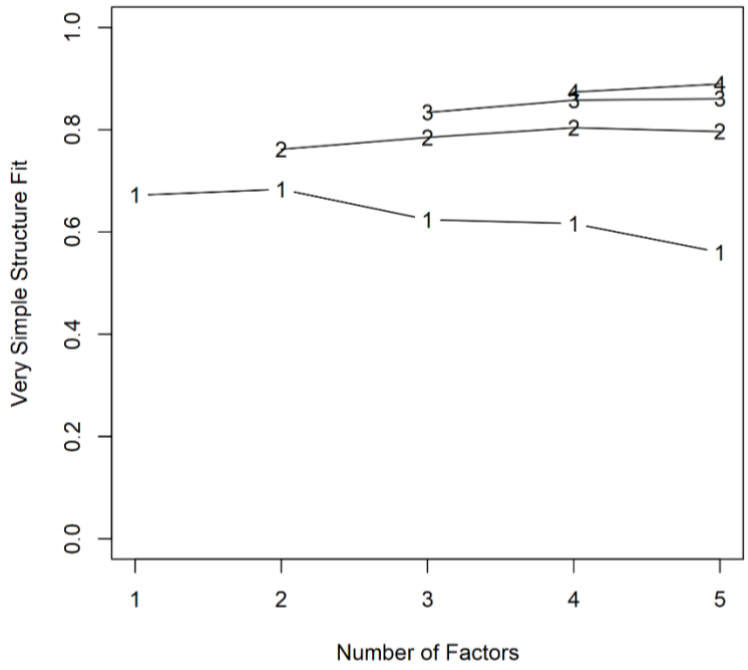


Figure 5.4: Very simple structure plot for KIDSCREEN-27

Parallel analysis suggested one factor for WEMWBS (Figure 5.5). The CFA showed poor fit according to user model versus baseline model metrics (*CFI* = 0.834; *TLI* = 0.803) and good fit in root mean square error-based metric (*RMSEA* = 0.102; $p(\chi^2) < 0.001$).

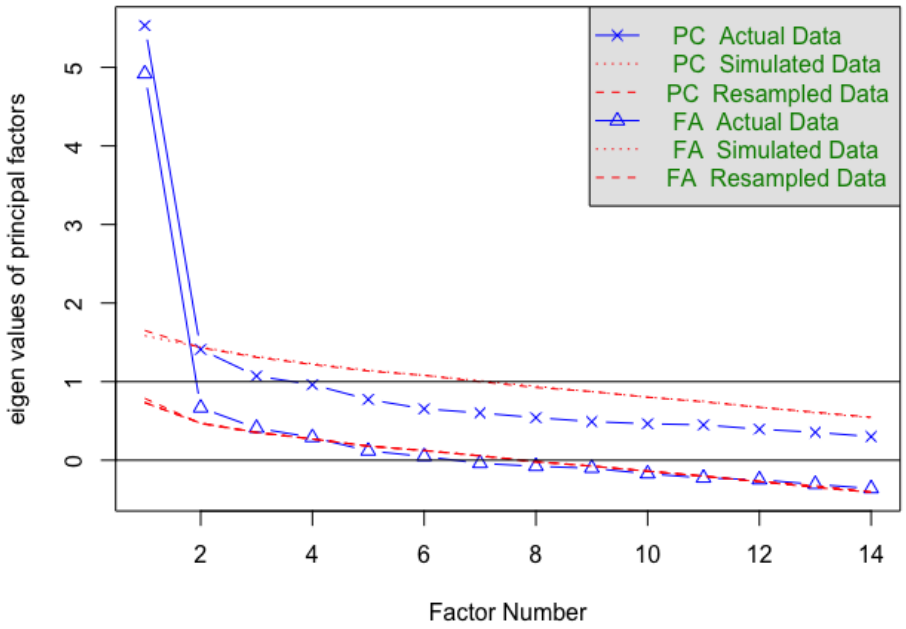


Figure 5.5: Parallel analysis scree plot for the WEMWBS

Step 5: classical test theory

In step 5, reliability metrics for KIDSCREEN-27 and WEMWBS were calculated using Cronbach's α, β, G6 λ, and ω (Table 5.4).

Table 5.4: Classical test theory values for KIDSCREEN-27, KIDSCREEN-27 subscales, and WEMWBS

	α	β	λ^*	ω
KIDSCREEN-27	0.89	0.64	0.94	0.88
Physical well-being	0.73	0.61	0.71	0.74
Psychological well-being	0.86	0.77	0.88	0.86
Autonomy and parent relation	0.78	0.62	0.82	0.77
Peers and social support	0.88	0.86	0.86	0.88
School environment	0.76	0.72	0.73	0.77
WEMWBS	0.88	0.76	0.89	0.87

** Guttman's Lambda 6*

Step 6: total (sub)scale scores

In the final step, data distribution was checked. The KIDSCREEN-27 scale shows acceptable distribution (Figure 5.6). The distribution of the results is not normal according to the Shapiro-Wilk test (p = 0.031). Mean value was 99.33 (SD = 16.16). The most skewed distribution was found with the peers and social support subscale.

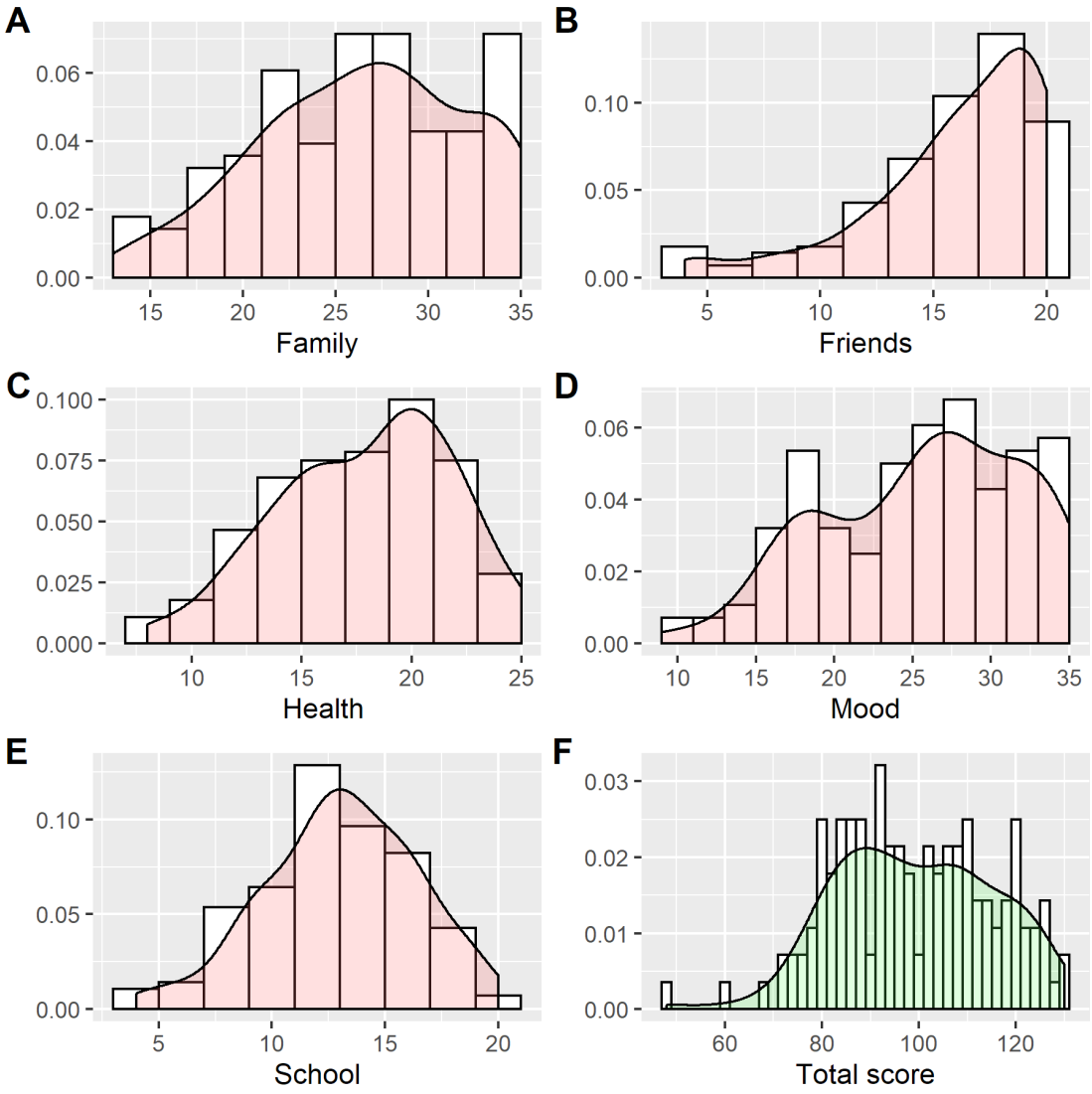


Figure 5.6: Data distribution of the KIDSCREEN-27 scale

Furthermore, data distribution of WEMWBS and all items were checked and are visualized in figure 5.7. The distribution of the results is normal according to the Shapiro-Wilk test (p = 0.071).

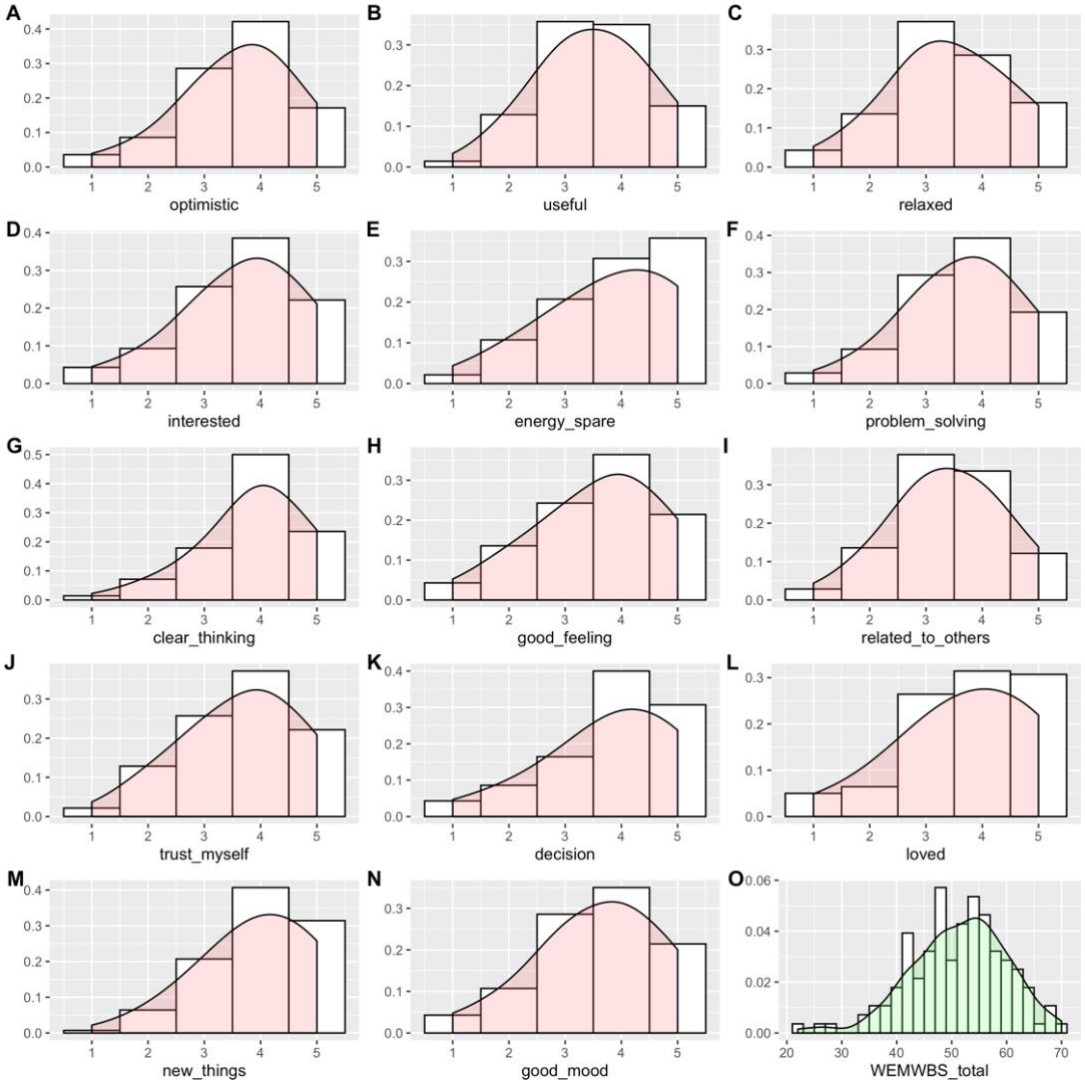


Figure 5.7: The WEMWBS items and total WEMWBS score distribution

Summary statistics were calculated and are shown in table 5.5.

Table 5.5: Summary statistics

	M	***SD***
KIDSCREEN-27	99.33	16.16
Physical well-being	17.94	3.93
Psychological well-being	25.74	6.28
Autonomy and parent relation	26.54	5.61
Peers and social support	16.06	3.88
School environment	13.06	3.39
WEMWBS	51.40	8.72

M = mean; SD = standard deviation.

Summary of the KIDSCREEN-27 subscales and the WEMWBS parameters shows expected scores. Extreme values were not detected.

Both questionnaires showed good psychometric properties and can are suitable for use among adolescents in Slovenia.

To perform content validity of the WEMWBS scale five experts from the field of adolescent mental well-being were included in the pilot study. For all 14 items of the WEMWBS scale, I-CVI, Pc, and k coefficient were calculated (Table 5.6).

Table 5.6: Content validity of the WEMWBS

Item(s)	*N*	*A*	*I-ICV*	*Pc*	*k*	Interpretation
I've been feeling optimistic about the future	5	4	0.80	0.16	0.76	Appropriate
I've been feeling useful	5	5	1.00	0.03	1	Appropriate
I've been feeling relaxed	5	5	1.00	0.03	1	Appropriate
I've been feeling interested in other people	5	5	1.00	0.03	1	Appropriate
I've had energy to spare	5	4	0.80	0.16	0.76	Appropriate
I've been dealing with problems well	5	5	1.00	0.03	1	Appropriate
I've been thinking clearly	5	5	1.00	0.03	1	Appropriate
I've been feeling good about myself	5	5	1.00	0.03	1	Appropriate
I've been feeling close to other people	5	4	0.80	0.16	0.76	Appropriate
I've been feeling confident	5	4	0.80	0.16	0.76	Appropriate
I've been able to make up my own mind about things	5	4	0.80	0.16	0.76	Appropriate
I've been feeling loved	5	4	0.80	0.16	0.76	Appropriate
I've been interested in new things	5	5	1.00	0.03	1	Appropriate
I've been feeling cheerful	5	5	1.00	0.03	1	Appropriate

N = number of experts; A = number of agreements; I-CVI = item content validity index; k = kappa designating agreement on relevance.

According to Polit & Beck (2006), I-CVI is acceptable when the item score is higher than 0.78. The kappa coefficient is excellent when the score is above 0.74, good when the score is between 0.60 and 0.74, and fair between 0.40 and 0.59 (Cicchetti & Sparrow,

1981). In the interpretation of the I-CVI item it is evaluated as appropriate if the score is higher than 79 percent (Abdollahpour, et al., 2010). In case that the score fits between 70 and 79 percent, it will need a revision and if it is less than 70 percent, it will need to be eliminated (Cilar, et al., 2020b).

In our case, experts rated all items as quite or highly relevant (rated with 3 or 4), so the S-CVI is computed to be 1.00 (Table 5.7). The S-CVI of 0.80 or higher is acceptable according to Davis (1992) and Polit & Beck (2004).

Table 5.7: Content validity of the WEMWBS

	Expert Rater no. 1	Expert Rater no. 2	Total
Items rated 1 or 2	0	0	0
Items rated 3 or 4	14	14	28
Items rated 3	4	1	5
Items rated 4	10	13	23
S-CVI			14/14=1.00

S-CVI = scale content validity index

The Slovenian versions of the WEMWBS scale and KIDSCREEN-27 scale achieved good validity, reliability, and psychometric properties. Both scales were translated into Slovenian language and were validated following specific recommendations. Our results support the initial hypothesis that the WEMWBS is a valid and reliable scale for measuring students' mental well-being and that the KIDSCREEN-27 is a valid and reliable scale for measuring students' social support. Thus, both scales were used in the main research.

5.2 The quantitative part of the main research

In this chapter, results from the quantitative part of the study are presented in the following order: demographic characteristics of the sample, psychometric testing in main quantitative part of research, and hypotheses testing.

5.2.1 Demographic characteristics of the sample

In the quantitative research, a total of 2 972 students participated in the study. Out of 6 967 distributed questionnaires, a total of 2 972 were completed and returned which represents a response rate of 42.6%. In table 5.8 all demographic characteristics are presented and tested for differences among primary (PS) and secondary school students (SS) in mental well-being by demographic characteristics. A total of 768 (54.6%) females in primary and 969 (66.6%) in secondary school, and 638 (45.4%) males in primary and 487 (33.4%) in secondary school participated in the study. Students from 5th to 9th grade in primary and from 1st to 5th grade in secondary school participated. The mean age among students in primary school was 12.2 (*SD* = 1.5) and 16.4 (*SD* = 1.3) among students in secondary school. Students were asked with whom they live. Primary and secondary school students most frequently answered that they live with their mother (PS: 1343, 90.7%; SS: 1369, 91.9%) or father (PS: 1204, 81.4%; SS: 1205, 80.9%). Students who answered "other" (PS: 48, 3.2%; SS: 55, 3.7%) described that they live either with a godfather/godmother, great-grandfather/ great-grandmother, uncle/aunt, nephew, cousin, guardian, foster father/foster mother, stepfather/stepmother, or alone. Moreover, students were asked to state in which of 12 Slovenian regions they live. Secondary school students were asked to mark which secondary school they are visiting. Secondary education in Slovenia is classified as general or vocational technical and secondary professional or technical education.

Table 5.8: Sample characteristics of the quantitative part of the study

	PS (*n* = 1489)	**SS (*n* = 1483)**
	M (SD)	***M (SD)***
Age	12.2 (1.5)	16.4 (1.3)
Gender	***n (%)***	***n (%)***
Female	768 (51.6%)	911 (66.8%)
Male	721 (48.4%)	452 (33.2%)
School year	***n (%)***	***n (%)***
1st	0 (0.0%)	400 (29.3%)
2nd	0 (0.0%)	381 (28%)
3rd	0 (0.0%)	252 (18.5%)

	PS (*n* = 1489)	SS (*n* = 1483)
4th	0 (0.0%)	311 (22.8%)
5th	264 (17.7%)	19 (1.4%)
6th	305 (20.5%)	0 (0.0%)
7th	266 (17.9%)	0 (0.0%)
8th	277 (18.6%)	0 (0.0%)
9th	377 (25.3%)	0 (0.0%)
Living environment		
With mother	1343 (90.7%)	1369 (91.9%)
With father	1204 (81.4%)	1205 (80.9%)
With sister/brother	1093 (73.9%)	1045 (70.2%)
With grandmother	316 (21.4%)	329 (22.1%)
With grandfather	214 (14.5%)	198 (13.3%)
Other	64 (4.3%)	59 (4.0%)
Living region		
Pomurska	2 (0.1%)	84 (5.8%)
Podravska	668 (47.2%)	127 (8.7%)
Koroška	3 (0.2%)	20 (1.4%)
Savinjska	44 (3.1%)	460 (31.6%)
Zasavska	63 (4.5%)	104 (7.1%)
Srednjeposavska	21 (1.5%)	17 (1.2%)
Gorenjska	79 (5.6%)	115 (7.9%)
Osrednjeslovenska	286 (20.2%)	169 (11.6%)
Jugovzhodna	172 (12.2%)	80 (5.5%)
Goriška	63 (4.5%)	126 (8.7%)
Notranjsko-kraška	9 (0.6%)	52 (3.6%)
Obalno-kraška	4 (0.3%)	101 (6.9%)
School programme		
General	0 (0.0%)	504 (34.7%)
Medical	0 (0.0%)	274 (18.9%)
Touristic	0 (0.0%)	103 (7.1%)
Educational	0 (0.0%)	194 (13.4%)
Computer sciences	0 (0.0%)	52 (3.6%)
Chemistry	0 (0.0%)	224 (15.4%)

	PS (*n* = 1489)	SS (*n* = 1483)
Other	0 (0.0%)	102 (7.0%)

PS = primary school students; SS = secondary school students; n = number.

In the following text, the psychometric testing of both scales, the WEMWBS and the KIDSCREEN-27, was repeated on data in the main quantitative part of the research to get more reliable and valid results on the usage of scales among the adolescent population in Slovenia. Results are presented and compared to the results in the pilot study.

5.2.2 Psychometric testing in main quantitative part of research

Due to a relatively small sample in the pilot study, scales were tested using the six-step validation process by Dima (2018). All six steps of psychometric testing are displayed in the following text.

Step 1: descriptive statistics

The response frequencies were checked for all items of KIDSCREEN-27 and WEMWBS to show if items have sufficient variation among respondents. The minimum score for KIDSCREEN-27 was 30 and the maximum of 135. The minimum score of WEMWBS was 14 and the maximum of 70. Both scale scores ranges are larger than in our pilot study. Compared to the pilot study results, ranges of scores of KIDSCREEN-27 and WEMWBS are wider in the main part of the research.

Moreover, inter-item correlations of KIDSCREEN-27 and WEMWBS were checked and presented in figure 5.8 and figure 5.9.

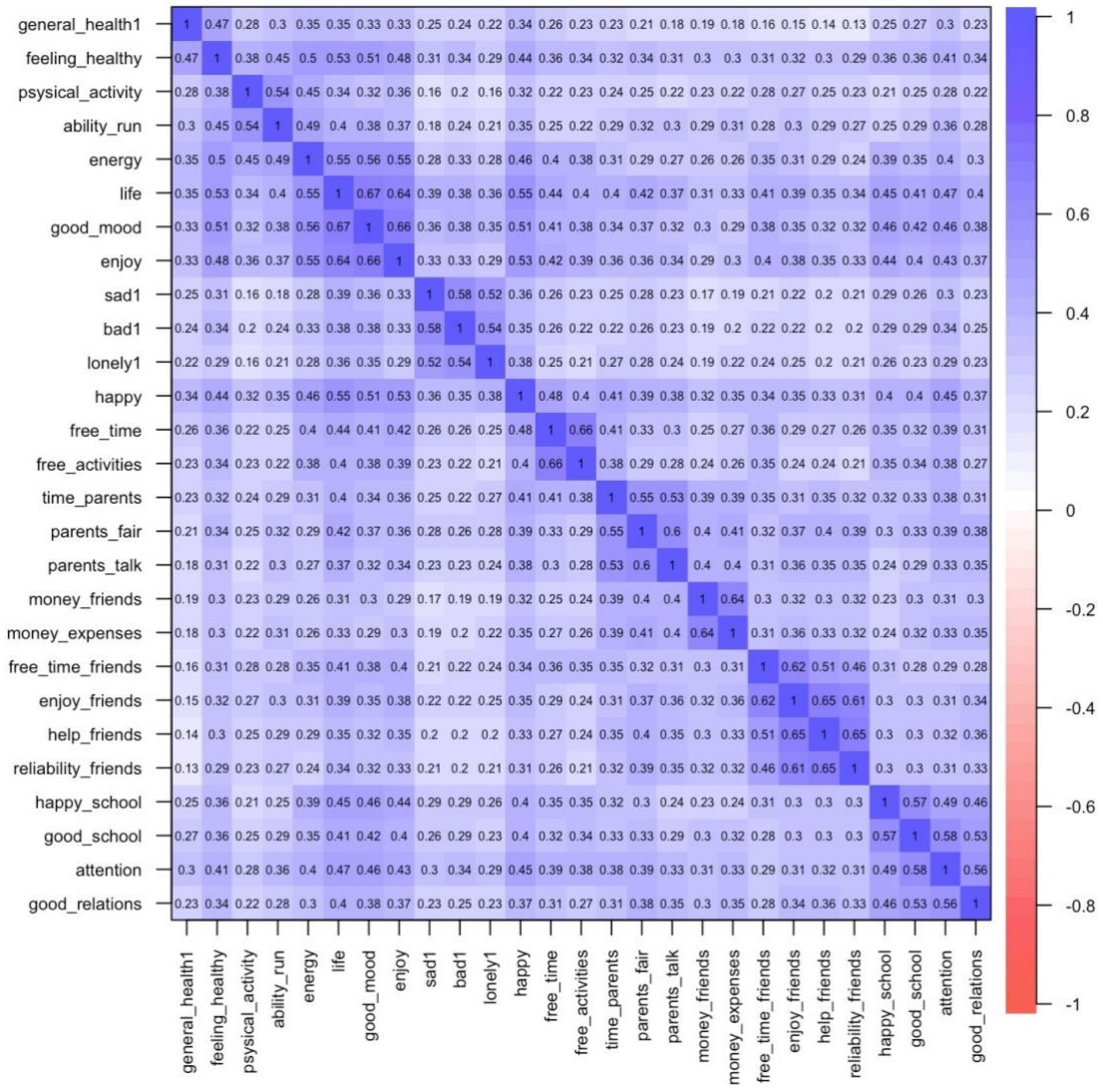


Figure 5.8:Correlation between KIDSCREEN-27 subscales

There are no negative correlations between KIDSCREEN-27 subscales. Correlations are in accordance with previous results of the pilot study. It seems that KIDSCREEN-27 is constructed of six subscales.

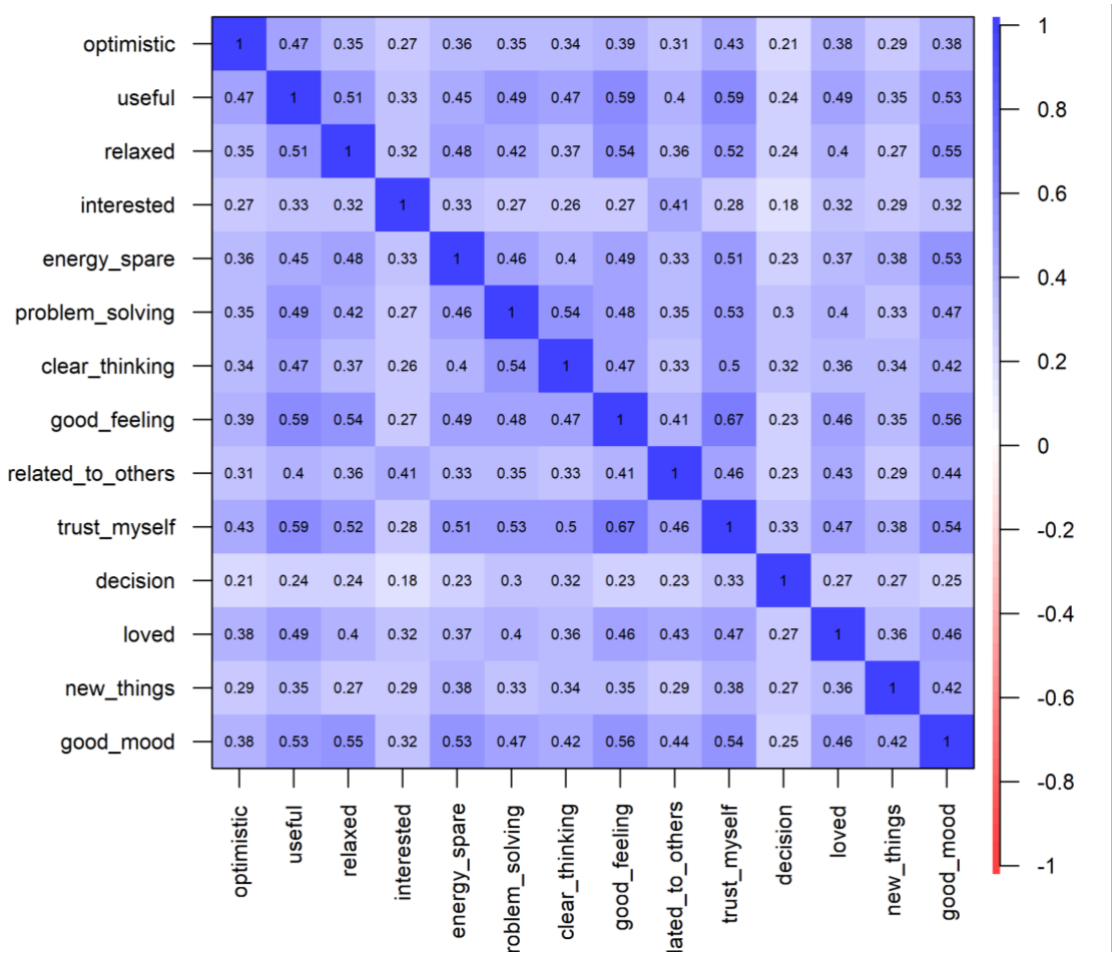


Figure 5.9: Correlation between WEMWBS items

There are no negative correlations between the 14 items in the WEMWBS scale. Item correlations range from 0.18 to 0.67. Results are similar to results in the pilot study, where there were no negative correlations among items.

Item correlations for the KIDSCREEN-27 and WEMWBS are all normal. There are no negative correlations and outliners.

Step 2: Mokken scale analysis

Using Mokken scale analysis scales, homogeneity was checked. The KIDSCREEN-27 scale is homogeneous ($H \geq 0.40$) for all five subscales (Table 5.9).

Table 5.9: Homogeneity coefficients for subscales of KIDSCREEN-27 and WEMWBS

Scale	*H (se)*
Physical well-being	0.450 (0.010)
Psychological well-being	0.479 (0.010)
Autonomy and parent relation	0.431 (0.010)
Peers and social support	0.664 (0.012)
School environment	0.574 (0.011)
WEMWBS	0.427 (0.009)

H=homogeneity coefficient; se=standard errors.

All items in KIDSCREEN-27 form a single scale at different homogeneity levels. The subscale physical well-being is unidimensional at the homogeneity level of 0.35, psychological well-being at 0.45, autonomy and parent relation at 0.55, peers and social support at 0.55, and school environment at 0.50. All subscales do form a unidimensional scale like in the pilot study. The WEMWBS homogeneity coefficient was 0.427 (*se* = 0.009), which is higher than in the pilot study.

Step 3: parametric item response theory (IRT)

Further, scales fit diagnose was performed with the Rating scale model. Item *infit* and *outfit* values for each subscale and WEMWBS scale are presented in table 5.10.

Table 5.10: The mean square of item fit values

Scale	Infit		Outfit	
	min	max	min	max
Physical well-being	0.733	1.061	1.065	0.737
Psychological well-being	0.737	0.988	0.718	1.101
Autonomy and parent relation	0.749	1.045	0.780	1.066
Peers and social support	0.540	0.993	0.545	1.020
School environment	0.675	0.852	0.678	0.861
WEMWBS	0.663	1.300	0.657	1.434

The KIDSCREEN-27 subscales have a range of *infit* between 0.540 and 1.061, and *outfit* between 0.545 and 1.101. Score ranges are somehow wider, values are similar to those in the pilot study, and are acceptable for the scale. The WEMWBS *infit* minimum was 0.663 and maximum 1.300, whereas the *outfit* minimum was 0.657 and maximum was 1.434. Like the KIDSCREEN-27 scale results, the WEMWBS scale results are similar to those in the pilot study.

Step 4: factor analysis

Again, parallel analysis based on tetrachoric correlations suggested eight factors and six components for the KIDSCREEN-27 scale (Figure 5.10). Our results from the VSS analysis point at the optimal number of two factors, but both, Velicer MAP and SABIC suggest a five factor structure.

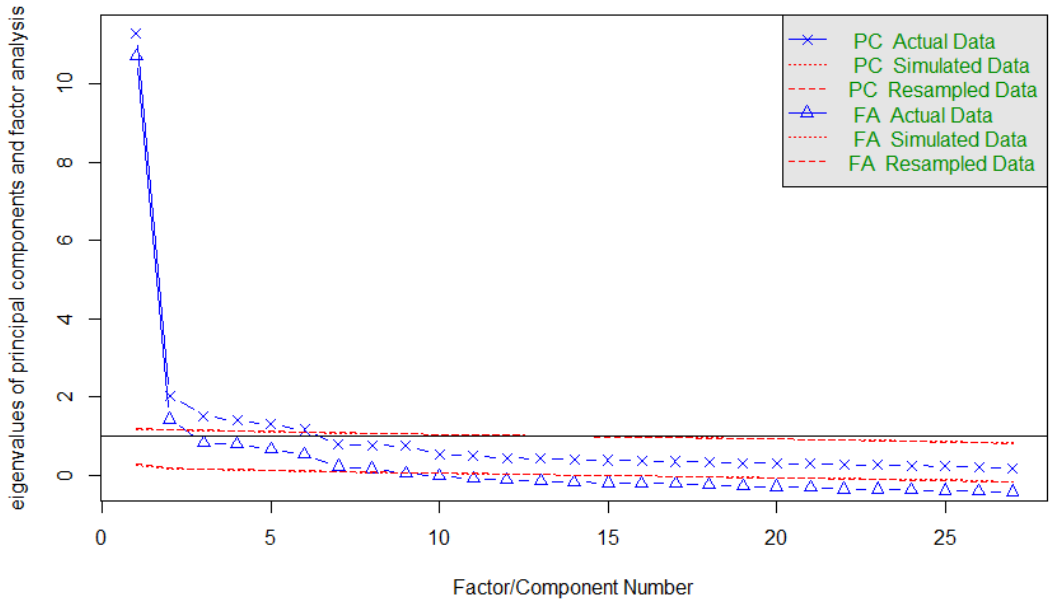


Figure 5.10: Parallel analysis scree plot for KIDSCREEN-27

The CFA for KIDSCREEN-27 showed average fit according to user model versus baseline model metrics (*CFI* = 0.847; *TLI* = 0.862) and good fit in root mean square error-based metric (*RMSEA* = 0.072; $p(\chi^2) < 0.001$). Results in figure 5.11 demonstrate that FA and PC curves fit the simulated and resampled data much more closely compared to the results from the pilot study.

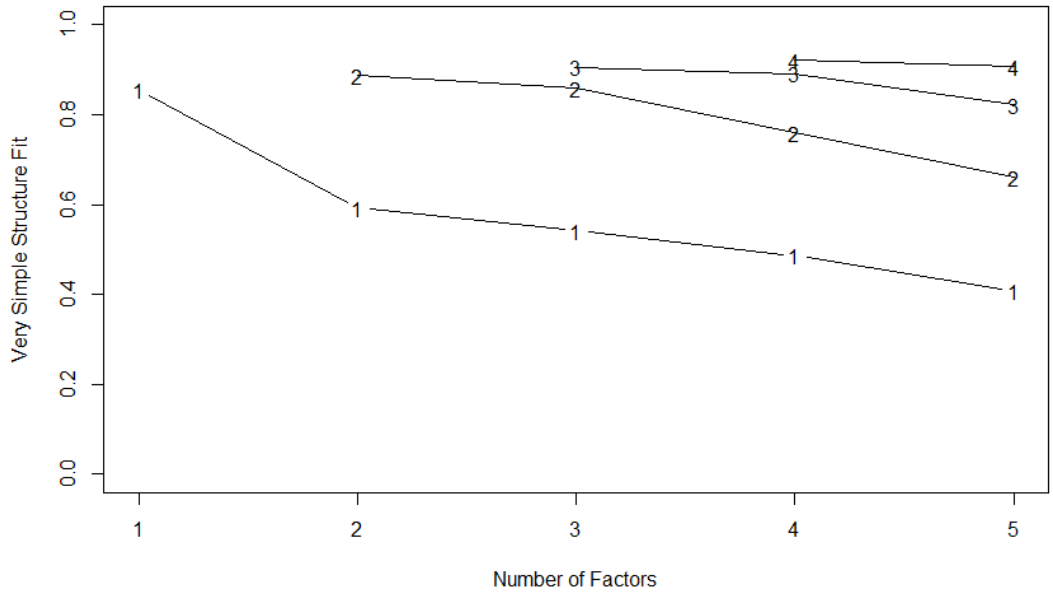


Figure 5.11: Very simple structure plot for KIDSCREEN-27

Parallel analysis suggested one factor for WEMWBS (Figure 5.12) as well as VSS (Figure 5.13). The CFA showed good fit according to user model versus baseline model metrics (*CFI* = 0.907; *TLI* = 0.890) and good fit in root mean square error-based metric (*RMSEA* = 0.086; $p(\chi^2) < 0.001$). Results for the WEMWBS are better than in the pilot study.

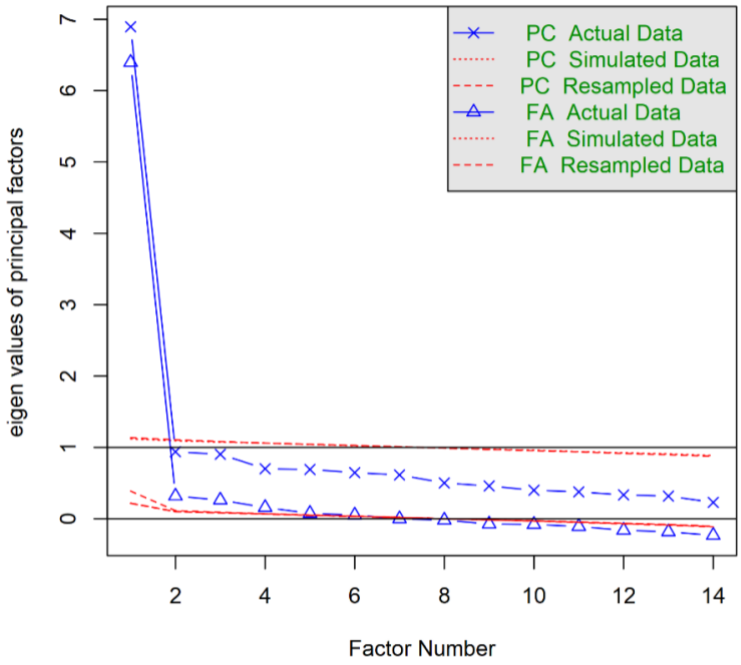


Figure 5.12: Parallel analysis scree plot for WEMWBS

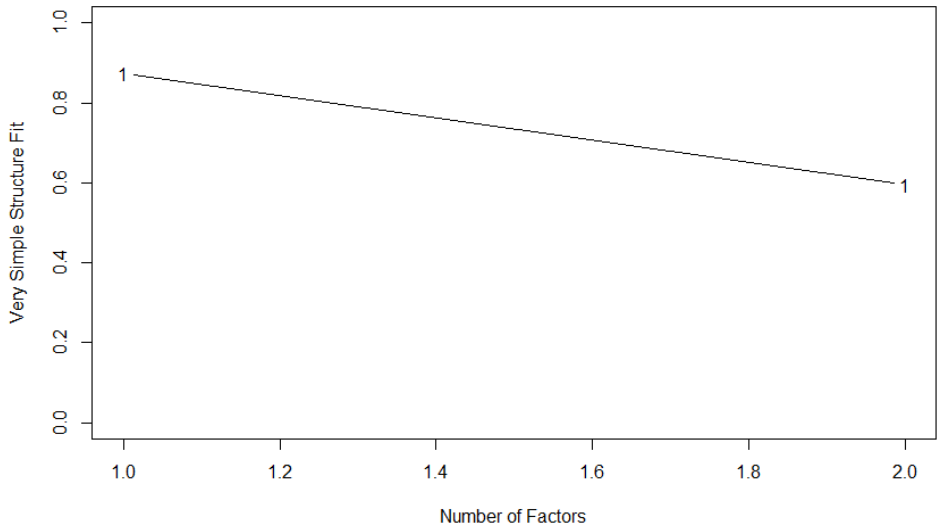


Figure 5.13: Very simple structure plot for WEMWBS

CFA was repeated and conducted separately for primary school students and secondary school students for KIDSCREEN-27. The CFA on results in primary school students showed average fit according to user model versus baseline model metrics (*CFI* = 0.863; *TLI* = 0.847) and average fit in root mean square error-based metric (*RMSEA* = 0.072; $p(\chi^2)$ < 0.001). Correlations between subscales and items are presented in the figure 5.14.

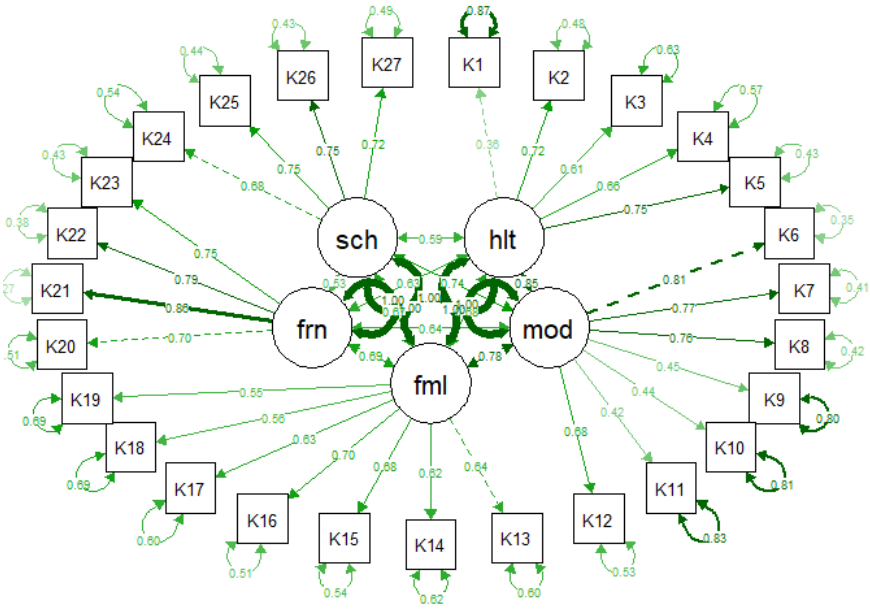


Figure 5.14: CFA confirmatory structure for KIDSCREEN-27 for primary school students

The CFA on results in secondary school students showed average fit according to user model versus baseline model metrics (*CFI* = 0.818; *TLI* = 0.797) and average fit in root mean square error-based metric (*RMSEA* = 0.086; $p(\chi^2)$ < 0.001). Correlations between subscales and items are presented in the figure 5.15. Both results are lower than in CFA conducted on a common sample.

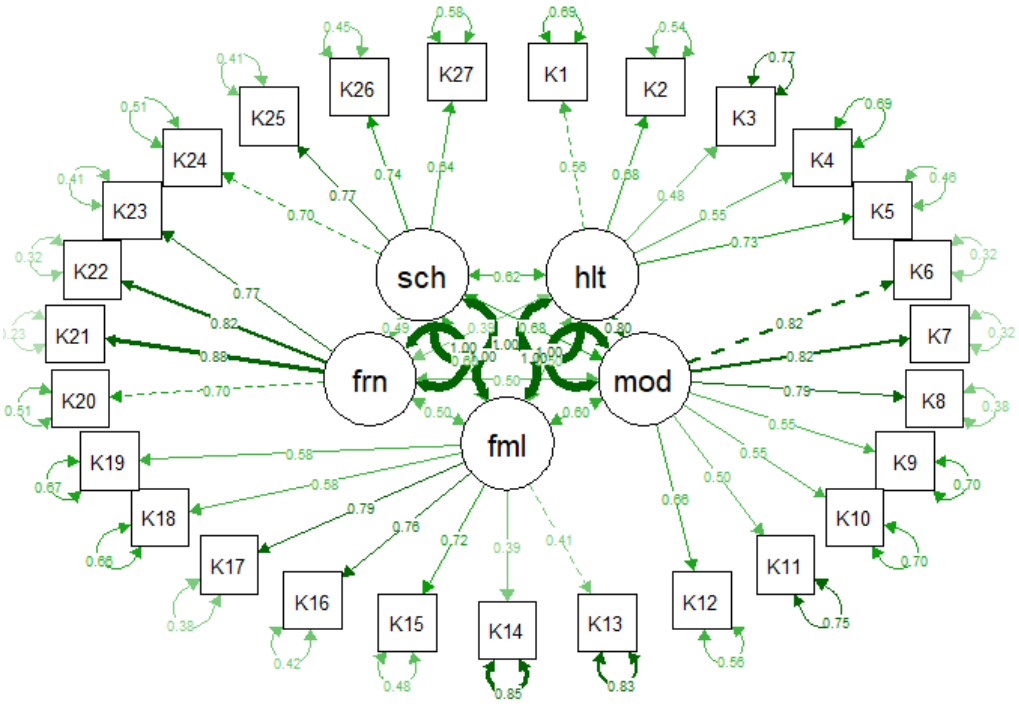


Figure 5.15: CFA confirmatory structure for KIDSCREEN-27 for secondary school students

CFA was also once again conducted separately for primary school students and secondary school students for WEMWBS. The CFA on results in primary school students showed good fit according to user model versus baseline model metrics (*CFI* = 0.937; *TLI* = 0.0.926) and good fit in root mean square error-based metric (*RMSEA* = 0.064; $p(\chi^2)$ < 0.001) (Figure 5.16).

The CFA on results in secondary school students showed good fit according to user model versus baseline model metrics (*CFI* = 0.920; *TLI* = 0.905) and good fit in root mean square error-based metric (*RMSEA* = 0.078; $p(\chi^2)$ < 0.001) (Figure 5.17). Both results are better than in CFA conducted on a common sample.

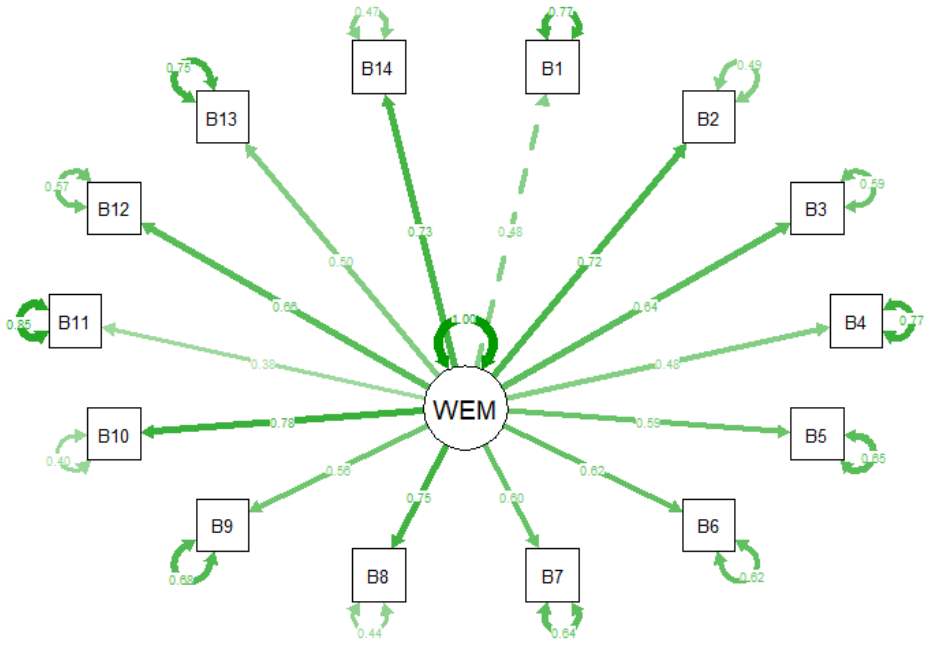


Figure 5.16: CFA confirmatory structure for KIDSCREEN-27 for primary school students

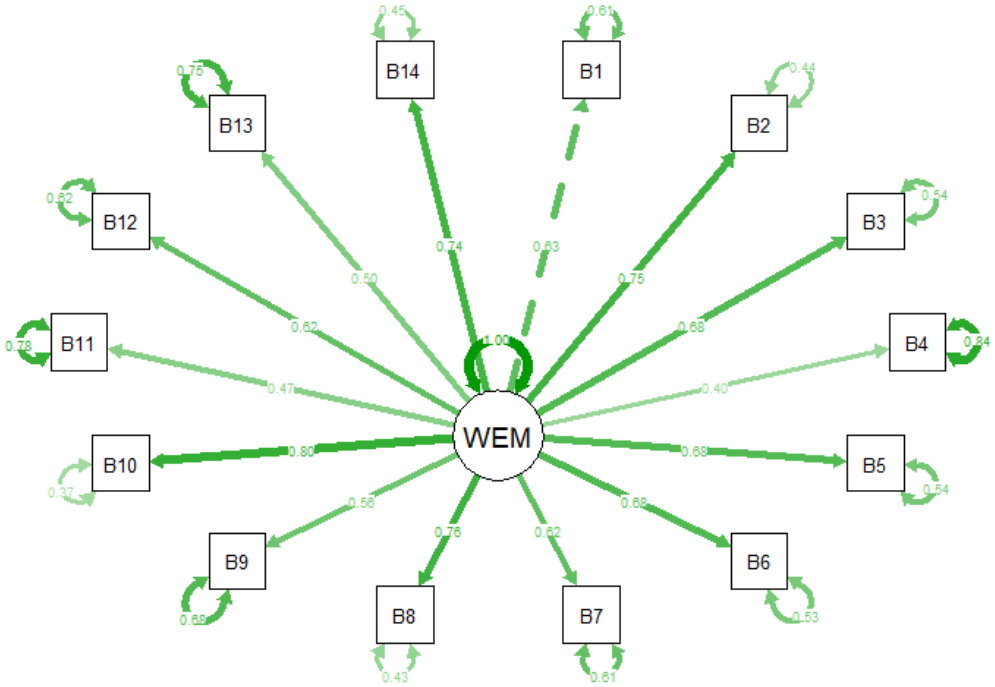


Figure 5.17: CFA confirmatory structure for KIDSCREEN-27 for secondary school students

Step 5: classical test theory

In step 5 reliability metrics for KIDSCREEN-27 and WEMWBS were calculated using Cronbach's α, β, G6 λ, and ω (Table 5.11).

Table 5.11: Classical test theory values for the KIDSCREEN-27, the KIDSCREEN-27 subscales, and the WEMWBS

	α	***β***	***λ****	***ω***
KIDSCREEN-27	0.93	0.86	0.95	0.93
Physical well-being	0.78	0.67	0.75	0.79
Psychological well-being	0.85	0.72	0.86	0.84
Autonomy and parent relation	0.83	0.68	0.84	0.82
Peers and social support	0.87	0.84	0.85	0.87
School environment	0.82	0.79	0.78	0.82
WEMWBS	0.89	0.83	0.89	0.89

** Guttman's Lambda 6*

In general, reliability metrics for both scales are better than in the pilot study.

Step 6: total (sub)scale scores

Summary of the KIDSCREEN-27 subscales and the WEMWBS parameters show expected scores (Table 5.12).

Table 5.12: Summary statistics

	M	***SD***
KIDSCREEN-27	101.23	18.46
Physical well-being	18.38	3.97
Psychological well-being	26.49	5.90
Autonomy and parent relation	26.26	5.76
Peers and social support	16.07	3.74
School environment	14.03	3.57
WEMWBS	52.38	9.22

M = mean; SD = standard deviation.

Extreme values were not detected. The Slovenian versions of the WEMWBS scale and KIDSCREEN-27 scale achieved good validity, reliability, and psychometric properties.

5.2.3 Hypotheses testing

There were 2 967 fully completed questionnaires which were included in the data analyses. Data distribution was checked using the Kolmogorov-Smirnov Test for Normality (Kirkman, 1996) for both KIDSCREEN-27 ($p < 0.001$) and WEMWBS ($p < 0.001$) total scores among primary school students and secondary school students. According to the results from Kolmogorov-Smirnov Test for Normality, data is not normally distributed. However, the central limit theorem was considered as it justifies the approximation of large-sample statistics to the normal distribution in controlled experiments. Moreover, data distribution in the form of histograms is presented in figure 5.18 and figure 5.19.

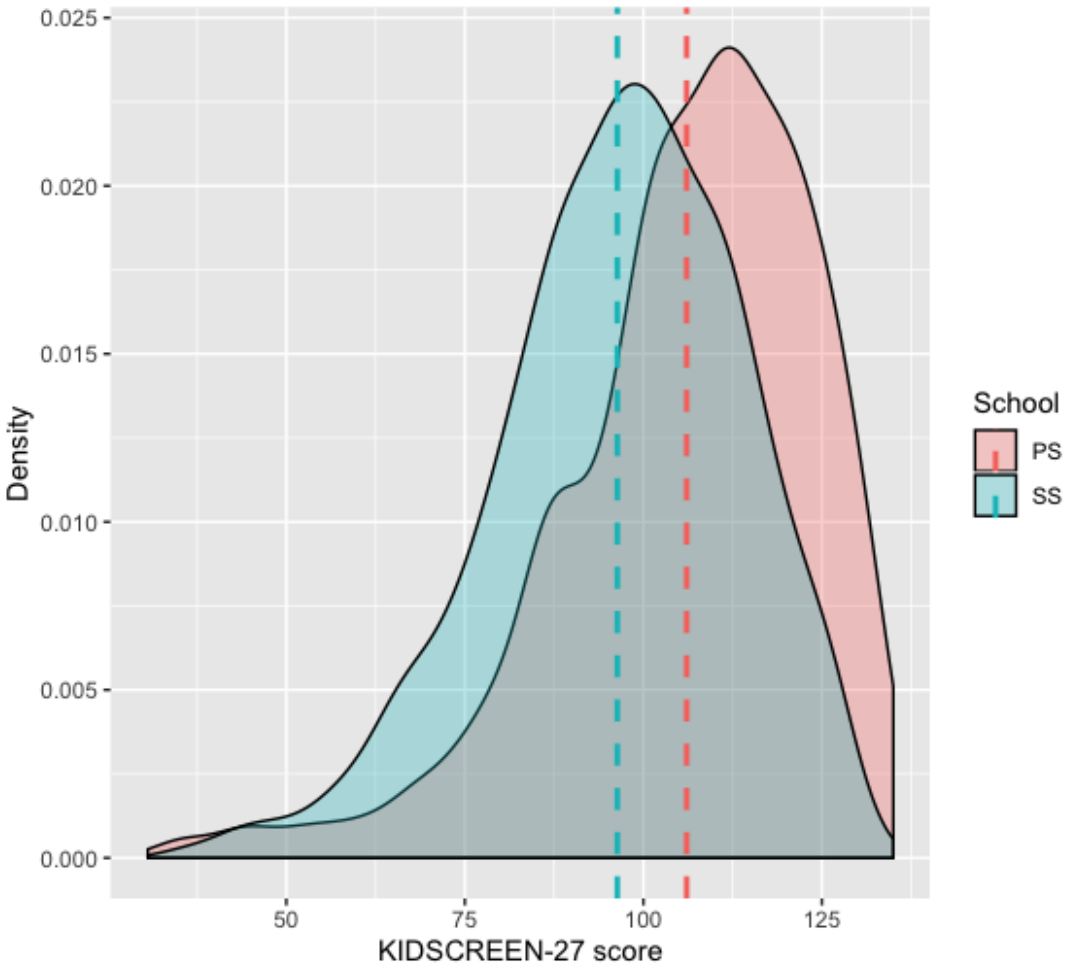


Figure 5.18: The KIDSCREEN-27score distribution for primary school students (PS) and secondary school students (SS)

As evident, data is distributed normally. There is also an evident difference in the mean of mental well-being and quality of life between primary school students and secondary school students. It is evident that **primary school students have higher quality of life and better mental well-being than secondary school students**.

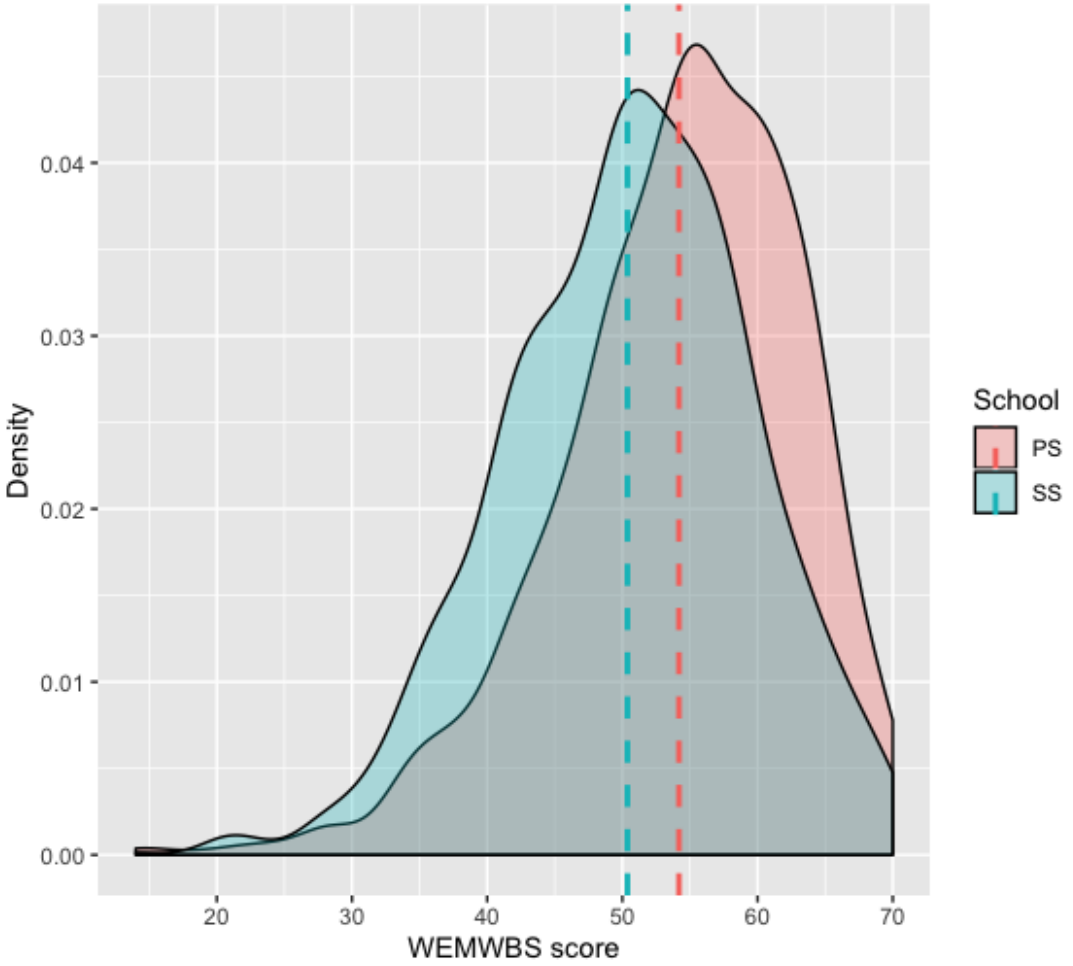


Figure 5.19: The WEMWBS score distribution for primary school students (PS) and secondary school students (SS)

Mean value of the mental well-being of primary school students was 54.11 (*SD* = 8.89) and mean value among secondary school students was 50.38 (*SD* = 9.11). Mean values of each item in the WEMWBS scale among primary and secondary school students are presented in the table 5.13.

Table 5.13: Mean and standard deviation for each item in WEMWBS

Item	PS		SS	
	M	***SD***	***M***	***SD***
I've been feeling optimistic about the future	3.59	1.03	3.56	0.94
I've been feeling useful	3.74	0.96	3.34	0.95
I've been feeling relaxed	3.77	0.97	3.43	0.98
I've been feeling interested in other people	3.72	1.02	3.62	0.92
I've had energy to spare	4.15	0.92	3.65	1.00
I've been dealing with problems well	3.67	1.02	3.39	0.96
I've been thinking clearly	3.92	0.91	3.62	0.92
I've been feeling good about myself	4.07	1.04	3.52	1.12
I've been feeling close to other people	3.62	1.09	3.43	1.00
I've been feeling confident	4.00	0.99	3.50	1.07
I've been able to make up my own mind about things	3.87	0.96	3.99	0.90
I've been feeling loved	3.83	1.08	3.68	1.05
I've been interested in new things	4.13	0.94	3.92	0.95
I've been feeling cheerful	4.02	0.92	3.72	0.91

PS = primary school students; SS = secondary school students; M = mean value; SD = standard deviation

It is evident that mental well-being varies with student age ($r(2965) = -0.239$, $p < 0.001$), with younger students having better mental well-being than older students. Also, mental well-being differs between genders ($t(2566.4) = -5.089$, $p < 0.001$), where male students ($M = 53.60$; $SD = 9.22$) have better mental well-being than female ($M = 51.65$; $SD = 9.15$). Mental well-being also differs among students in different school years ($r(2965) = -0.277$, $p < 0.001$) which is in accordance with results in mental well-being and student age. Mental well-being differs among various living environments. There is a difference among students living with their mother ($U = 254156$, $p = 0.041$) and father ($U = 513288$, $p = 0.001$).

There is statistically significant difference in secondary school students' mental well-being and choice of high school ($H(6) = 18.705$, $p = 0.005$). Differences are seen among students in general high school and medical high school, as well as chemistry high school and medical high school. Also, we were interested if friend support among different high

school programmes had an impact on student mental well-being. Results show that mental well-being depends on friend support in general high school ($r(1483) = 0.344$, $p < 0.001$), medical high school ($r(1483) = 0.344$, $p < 0.001$), touristic high school ($r(1483) = 0.429$, $p < 0.001$), educational high school ($r(1483) = 0.269$,$p < 0.001$) and other high schools ($r(1483) = 0.360$, $p < 0.001$).

Mental well-being of students differs among different living regions ($H(11) = 70.689$, $p < 0.001$). Details about the differences among various regions are demonstrated in Table 5.14. When compared with the results in the pilot study, results in the main quantitative part of the research are more stable, showing more significant results. Students from 11 regions in Slovenia participated in the research. In figure 5.20, the distribution of respondents in primary and secondary schools in different regions in Slovenia can be seen.

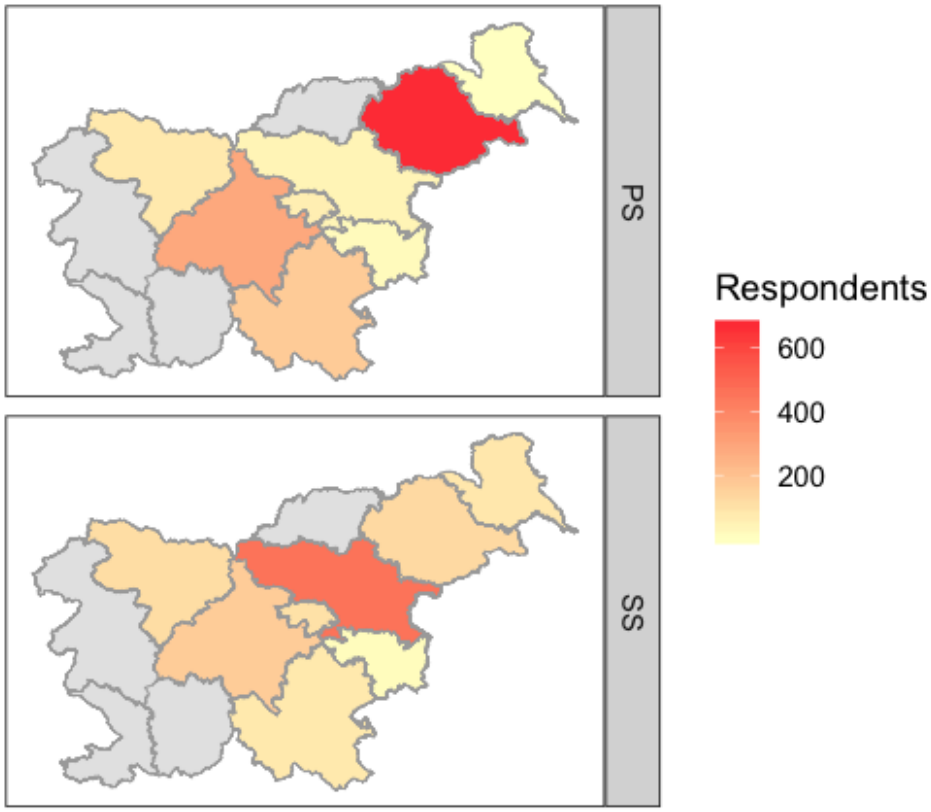


Figure 5.20: Inclusion of students in PS (above) and SS (below) by region

Significant differences were found in student mental well-being in different regions in Slovenia ($H(11) = 70.689$, $p < 0.001$) (Table 5.14). The highest level of mental well-being was found in students living in Podravska region (M=54.36; SD=9-50), while the lowest among students living in Koroška region (M=46.82; SD=12.98).

Table 5.14: Mean value of the mental well-being of students in different regions

	PS	***SS***	***p-value***
Living region	***M(SD)***	***M(SD)***	
Pomurska	62.50(10.61)	52.86(10.31)	0.196
Podravska	55.00(9.21)	50.86(10.30)	<0.05
Koroška	41.00(20.66)	47.58(12.03)	0.503
Savinjska	56.03(6.10)	50.17(8.57)	<0.05
Zasavska	52.70(7.92)	51.03(9.20)	0.243
Srednjeposavska	50.22(7.93)	51.36(7.70)	0.672
Gorenjska	54.73(7.49)	48.86(8.62)	<0.05
Osrednjeslovenska	54.00(8.99)	50.40(9.30)	<0.05
Jugovzhodna	53.37(8.19)	50.88(9.00)	0.034
Goriška	57.02(7.29)	50.26(10.03)	<0.05
Notranjsko-kraška	53.55(5.46)	52.06(7.61)	0.577
Obalno-kraška	52.67(10.12)	51.67(8.39)	0.841

PS = primary school students; SS = secondary school students; p-value = statistical significance value; M = mean; SD = standard deviation.

Results are in accordance with previous findings, meaning that primary school students have better mental well-being than secondary school students. In six regions primary students' mental well-being is significantly higher than secondary students' mental well-being. In table 5.15 mean values and standard deviations of mental well-being are listed for primary and secondary school students among different regions. Those results should be interpreted with caution due to non-parametric data distribution and relatively high values of standard deviations.

Mean value of the social support of primary school students 106.04 (SD = 18.07) and mean value among secondary school students was 96.34 (SD = 17.37). Mean values and standard deviations of each value of the KIDSCREEN-27 items for primary and secondary school students are presented in the table 5.15.

Table 5.15: Mean and standard deviation for each answer in KIDSCREEN-27

	PS		SS	
Item	***M***	***SD***	***M***	***SD***
General health assessment	4.02	0.90	3.67	0.88
Feeling healthy	3.86	0.99	3.45	0.98
Physical activity	3.83	1.15	3.23	1.20
Ability to run	4.08	1.07	3.67	1.15
Energy	3.76	1.07	3.16	1.13
Life	3.96	1.03	3.51	1.08
Good mood	3.80	1.01	3.41	1.01
Enjoy	3.85	1.09	3.42	1.09
Sad	4.01	1.17	3.63	1.15
Bad	4.21	1.18	3.79	1.29
Lonely	4.26	1.16	3.82	1.30
Happy	3.91	1.14	3.36	1.19
Free time	3.71	1.14	3.14	1.17
Free activities	3.53	1.22	2.95	1.20
Time parents	3.86	1.10	3.56	1.15
Parents fair	4.14	1.07	3.94	1.12
Parents talk	4.05	1.15	3.93	1.21
Money friends	3.83	1.22	3.70	1.21
Money expenses	4.12	1.17	3.95	1.14
Free time friends	3.89	1.13	3.69	1.15
Enjoy friends	4.24	1.04	4.10	1.11
Help friends	4.13	1.03	4.00	1.09
Reliability friends	4.08	1.09	4.00	1.11
Happy school	3.36	1.23	3.03	1.10
Good school	3.69	1.12	3.31	1.04
Attention	3.76	1.07	3.27	1.01
Good relations	3.93	1.09	3.66	1.02

PS = primary school students; SS = secondary school students; M = mean value; SD = standard deviation

Moreover, correlations of age and school were checked for both scales (Figure 5.21).

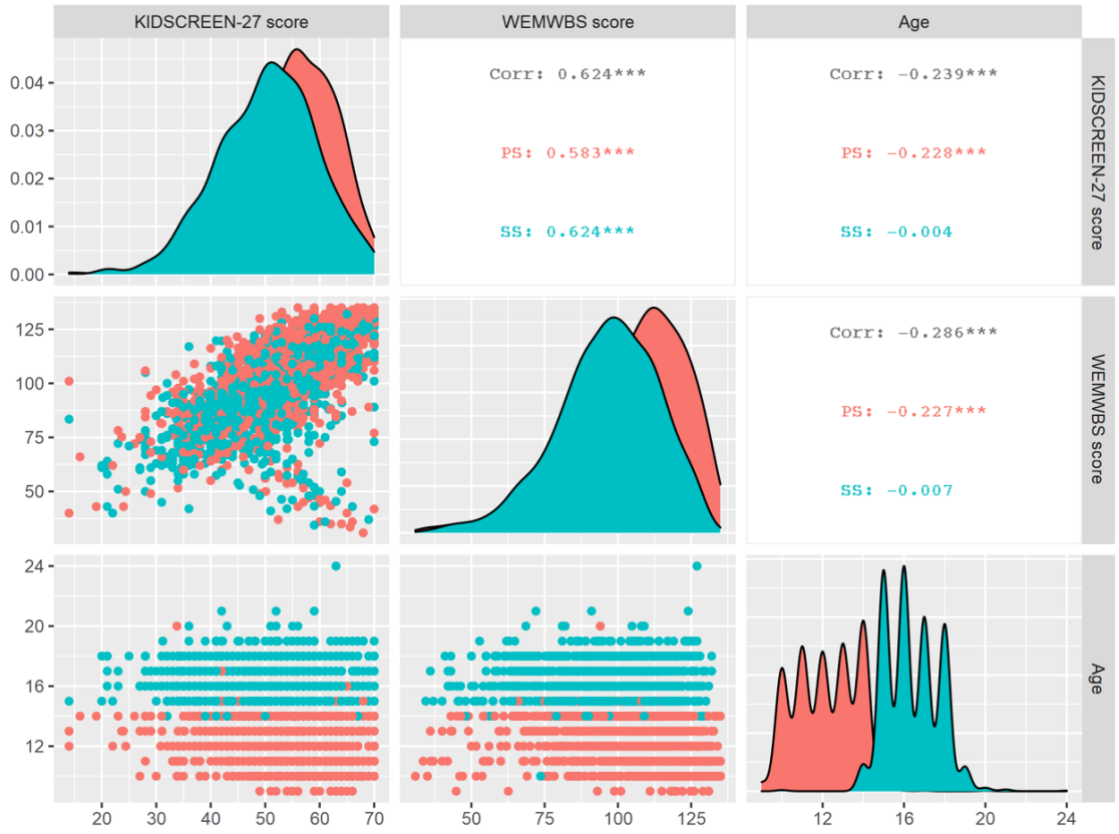


Figure 5.21: Correlations between age, KIDSCREEN-27 total score, and WEMWBS total score

As evident from the figure 5.21, the **students' mental well-being (*r* = -0.286) and quality of life decrease (*r* = -0.239) with age.** Students' mental well-being (WEMWBS score) is positively correlated (*r* = 0.624) with their quality of life (KIDSCREEN-27 score) which means that students with better mental well-being have also better quality of life.

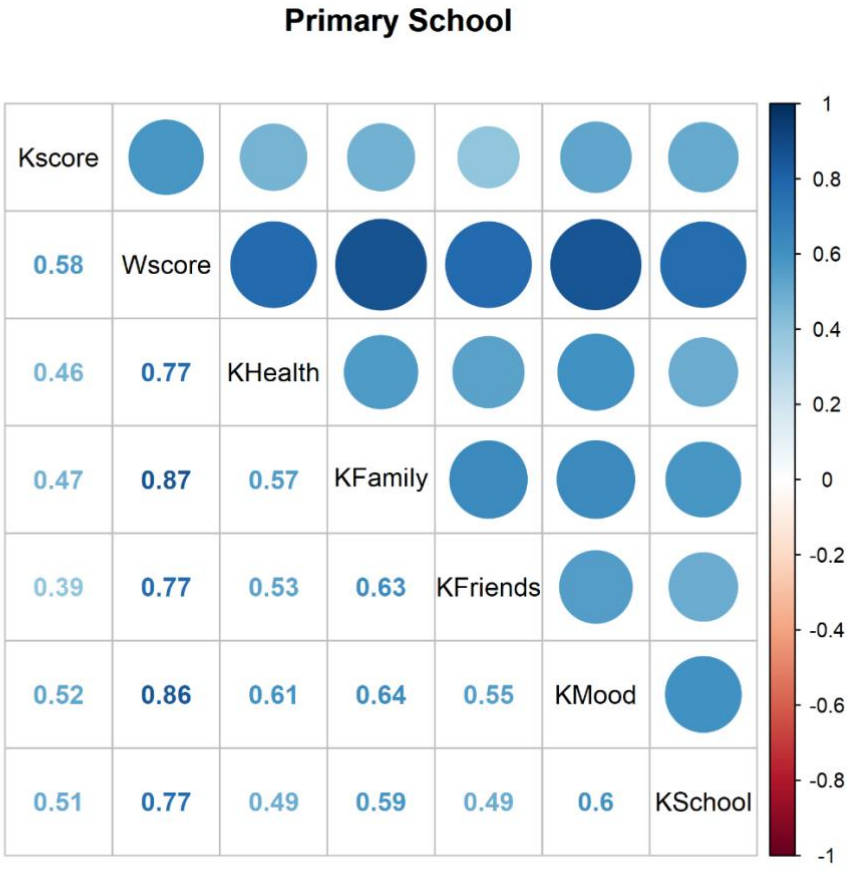


Figure 5.22: Correlations between KIDSCREEN-27 subscales and WEMWBS total score for primary school students

Correlations between items among subscales of the KIDSCREEN-27 scale are positive among both primary school students and secondary school students. The WEMWBS is also positively correlated with the KIDSCREEN-27 total score and each KIDSCREEN-27 subscale (Figure 5.22 and Figure 5.23). This means **students' mental well-being is positively correlated with their social support** in both primary and secondary school students.

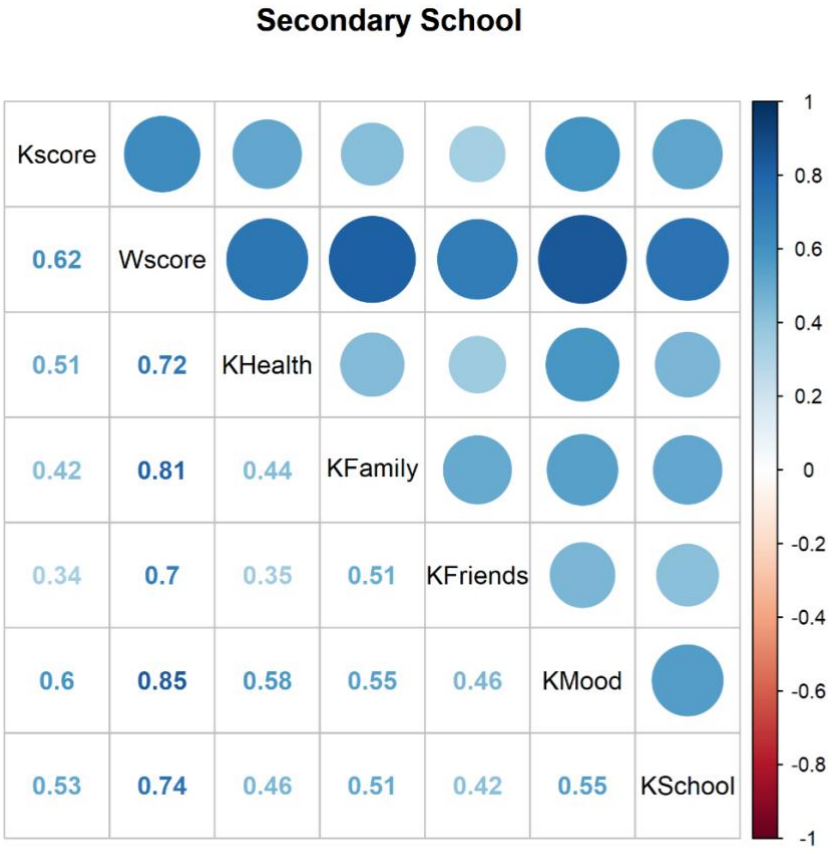


Figure 5.23: Correlations between KIDSCREEN-27 subscales and WEMWBS total score for secondary school students

To make those correlations more clear, additional analyses were performed. The Glasso models for primary and secondary school students are presented in the following text as well as Figures 5.24 and 5.25.

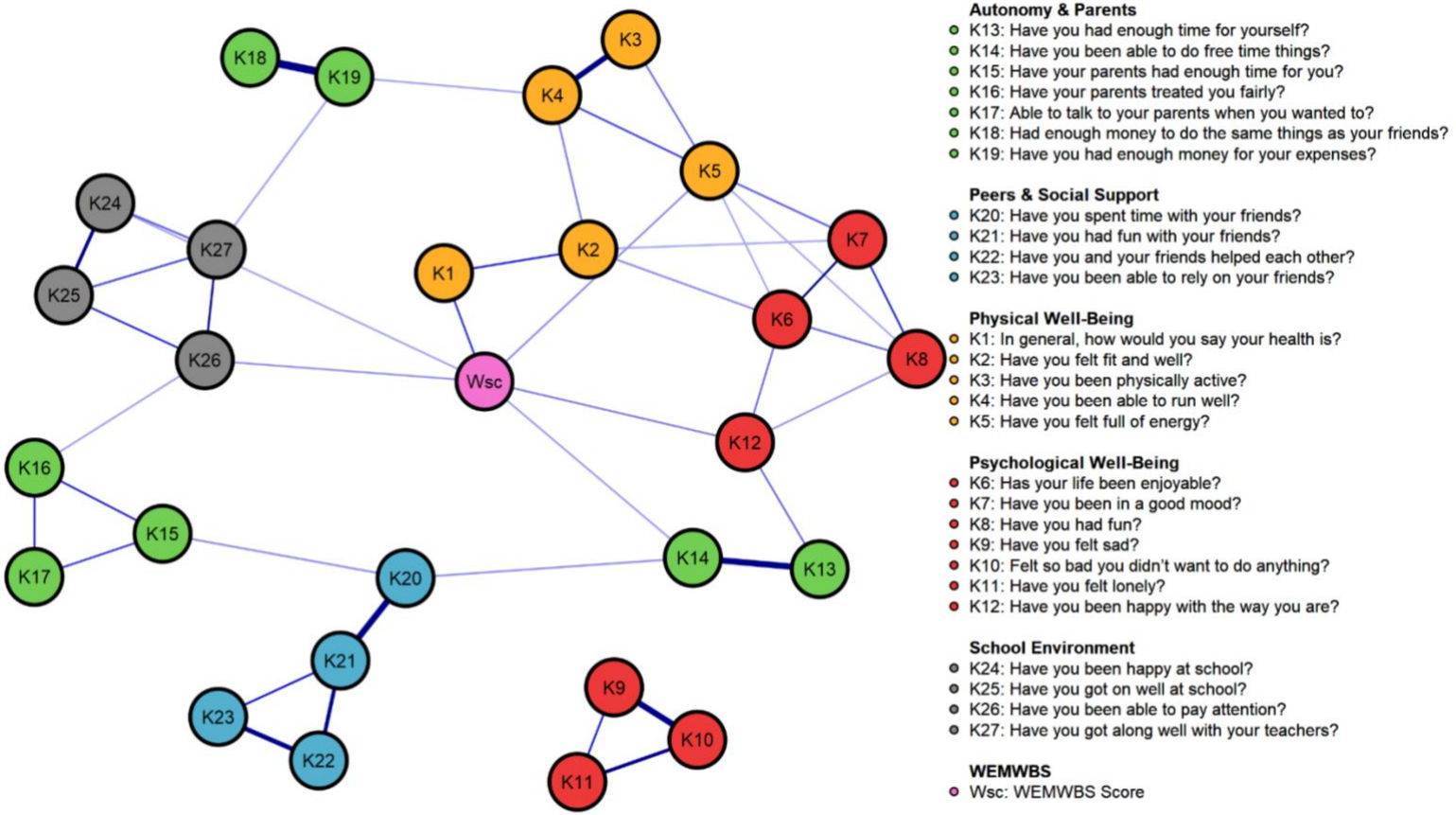


Figure 5.24: The Glasso model for primary school students

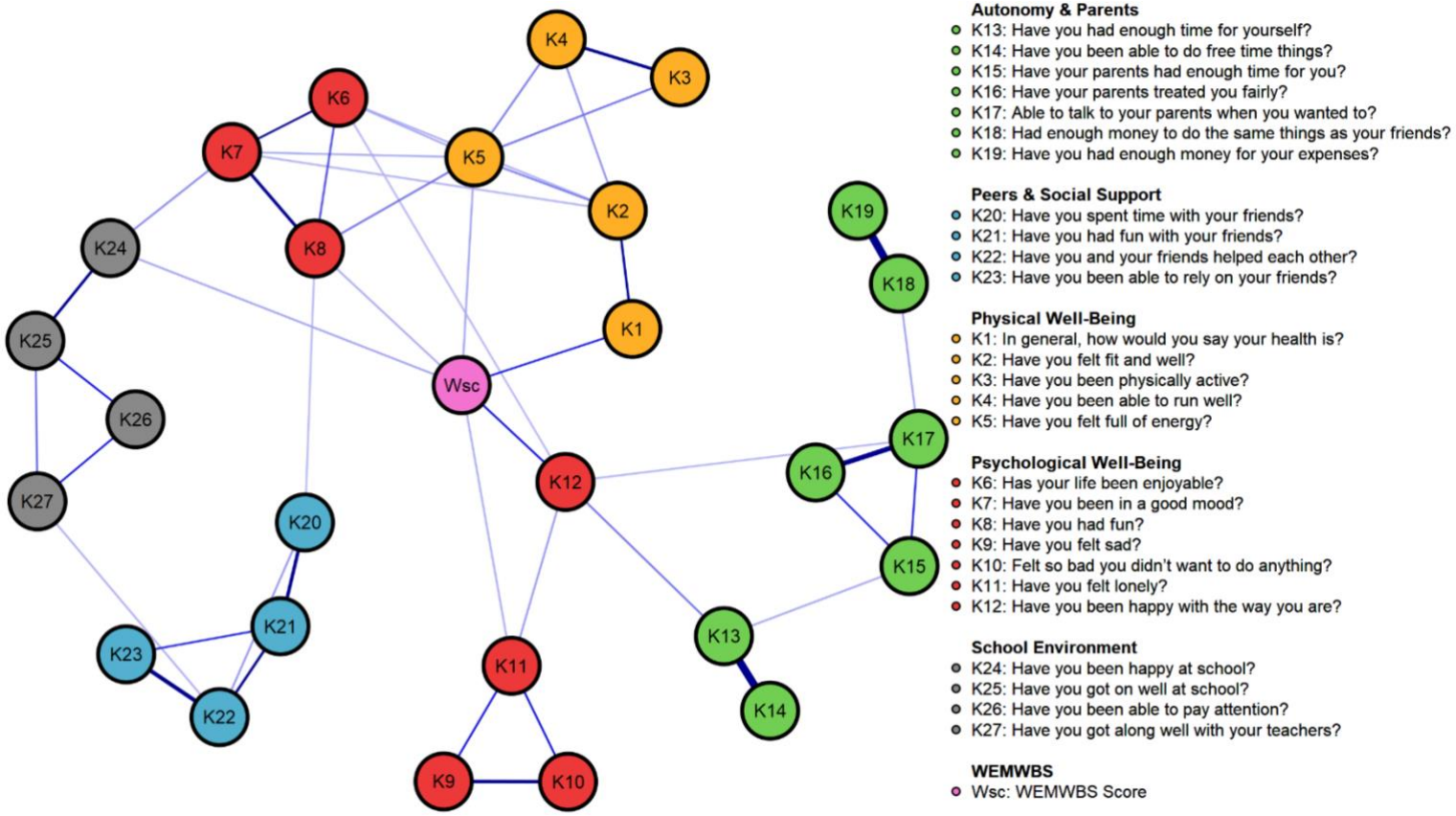


Figure 5.25: The Glasso model for secondary school students

In figure 5.24 correlations between items of KIDSCREEN-27 and the WEMWBS total score among primary school students are presented. The original KIDCREEN-27 scale consists of five subscales measuring five concepts. The findings show that there might be more concepts among each subscale when measuring social support among primary school students. In the first subscale “Autonomy and parents”, those two concepts are seen as separate concepts. One concept can be “Autonomy” with items related to money and expenses, other can be “Parent’s support”, and the third “Free time”. Another subscale is named “Peers and Social Support” (coloured blue). Items in this subscale are all positively correlated with each other. Third subscale “Physical well-being” contains items that are positively correlated. This subscale is also correlated with student’s mental well-being (WEMWBS). “Psychological well-being” subscale is separated in two concepts. One is related to the emotional well-being, and another to negative emotions. In the second one, negative items were reverse coded. Items related to emotional well-being are in correlation with mental well-being. Mental well-being is also correlated with school support.

In figure 5.25 correlations between items of KIDSCREEN-27 and WEMWBS total score among secondary school students are presented. Figure 5.24 is slightly different from figure 5.25. Findings show that there are more than five subscales. The findings show that there might be more concepts among each subscale when measuring social support among secondary school students. The first subscale “Autonomy and parents” also has three concepts as described for figure 5.24 but those are inter-correlated. “Peers and Social Support” subscale items are all positively correlated with each other. Same as among primary school students, “Physical well-being” is correlated to “Mental well-being”. The “Psychological well-being” is again separated in two concepts. Both are correlated with “Mental well-being”. This time one item is placed in different concept. Also, school support is correlated with “Mental well-being”.

The first hypothesis was tested using Pearson’s correlation coefficient. The hypothesis is confirmed. Support for adolescents by their family is positively related with their mental well-being ($r(2965) = 0.469$, $p < 0.05$). **The better the familial support, the better an adolescent’s mental well-being.** The second hypothesis is also confirmed. Support

for adolescents by friends is positively related with their mental well-being ($r(2965) = 0.373$, $p < 0.05$). **The better the support from friends, the better an adolescent's mental well-being.** Finally, the third hypothesis is not confirmed. **The perceived level of support from the RNs does not differ between students by age** ($r(2965) = -0.004$, $p = 0.863$) and **gender** ($W = 310616$, $p = 0.903$).

All hypotheses were then tested once again in regard to the living region. Non-parametric tests were used due to data distribution among regions. It was once again proven that familial support is correlated with student mental well-being in different statistical regions. Results show that there is a significant correlation between variables in all regions, except in Srednjeposavska region ($r(2965) = 0.202$, $p = 0.252$). Also, the hypothesis that adolescents' mental well-being is correlated to their friends' support in all statistical regions was confirmed, except in Koroška region ($r(2965) = 0.375$, $p = 0.103$). When talking about the perceived level of support from the RNs and student age, results are the same, except in Pomurska region ($r(2965) = -0.099$, $p = 0.018$). Likewise, results about perceived RNs support by gender differ in Zasavska ($W = 1556$, $p = 0.020$) and Obalno-kraška regions ($W = 430$, $p = 0.043$).

The main findings from quantitative part of the research are summarized in table 5.16.

Table 5.16: Data synthesis of the finding of quantitative part of the research

Category	Subcategories	Main findings/Codes
Social support has an important role in maintaining students' mental well-being	Students' mental well-being and social support differ between various demographic characteristics	Student mental well-being differs with age and school year. Primary school students have better mental well-being than secondary school students.
		Student mental well-being differs by gender. Male adolescents have better mental well-being than female.
		Student mental well-being differs among students living with different people.
		Student mental well-being differs by region in Slovenia. Students living in Podravska region have the highest score of mental well-being. Students living in Koroška region have the lowest score of mental well-being.
		Mental well-being differs between students in different high school programmes. Also, secondary school students' mental well-being is correlated to friends' support.
	Social support impacts student's mental well-being	Primary school students have better social support than secondary school students.
		Student social support decreases with age.

Results show that adolescents' mental well-being depends on various factors, such as gender, age, study year, high school programme, living environment, and living region in Slovenia. Also, adolescents' mental well-being is better among adolescents with better social support than among adolescents with poor social support.

In the 3rd part of the questionnaire, students answered questions related to systematic health visits (individual and group), subjects covered during health visits, and opinion on nurse's role. Students were asked when they had the last systematic health visit. Primary and secondary school students' answers are presented in Table 5.17. Those answers are their opinion on their last health visit.

Table 5.17: Health visits in primary and secondary school

School		n	%
Primary school	This year	406	28.1
	One year ago	570	39.5
	Two years ago	337	23.4
	Three years ago	58	4.0
	In the last year I didn't have health visit	19	1.3
	Other	53	3.7
Secondary school	This year	364	24.8
	One year ago	731	49.8
	Two years ago	300	20.4
	Three years ago	47	3.2
	In the last year I didn't have health visit	10	0.7
	Other	16	1.1

More than half of students in primary school (n = 812, 54.9%) and secondary school (n = 924, 62.1%) remember they had team conversations. Most commonly students reported that they talked about growing up, physical activity, and sexuality. They remembered talking about feelings in school and feelings in correlation with relations with family and peers.

Further, students were asked to write their opinion on the role of nurses in the field of adolescents' mental well-being support. A total of 1 467 (52.56%) students answered the open question on nurse's role in supporting adolescent's mental well-being.

Data analysis was performed to develop a word-cloud with most frequent words used. This is a robust text mining method to find the most frequently used words in a text. Figure 5.26 represents most used words by the adolescents to describe a nurse's role in adolescents support of mental well-being.

Figure 5.26: Word cloud – nurses' role in providing adolescents mental well-being

Adolescents most frequently answered that a **nurse's role is to help adolescents, advise them, talk to them, and explain various problems**. On the other hand, many did (50.7%) write that they do not know what the nurses' role is.

Answers were also analysed using LDA using Gibbs sampling. After the first screening of the results, the number of topics (*k*) was chosen based on the most frequent answers (*n* was 100 or more).

Table 5.18: Topics extracted by the Linear Dirichlet Allocation

Topic 1	role	import	play	big	explain	physic
Topic 2	advis	person	direct	understand	live	interest
Topic 3	talk	nurs	life	explain	give	answer
Topic 4	problem	Feel	people	convers	Opinion	Tri
Topic 5	adolesc	advic	give	patient	talk	individu
Topic 6	know	grow	doctor	encourag	assist	import
Topic 7	mental	health	adolesc	trust	explain	inform

The first six terms in each topic are presented in table 5.18. The table contains stemmed form of the words to allow grouping of the same words in different forms.

Table 5.19: Data synthesis of open-ended question

Categories	Subcategories	Codes					
Individual person-directed care	Individual approach to care for adolescents and patients	adolesc	advic	give	patient	talk	individu
	Person directed care	advis	person	direct	understand	live	interest
Educational role of a nurse	Nurses' professional knowledge	know	grow	doctor	encourag	assist	import
	The important role of a nurses	role	import	play	big	explain	physic
Therapeutic interpersonal relations	Problem-based communication	problem	Feel	people	convers	opinion	tri
	Educational and therapeutic role of a nurses	talk	nurs	life	explain	give	answer
	Nurses' relationship with adolescent in correlation with their mental well-being	mental	health	adolesc	trust	explain	inform

In the table 5.19, findings (Appendix N) are synthesized by common characteristics. Extracted words are displayed in the form of codes, and topics are displayed in the form of subcategories and grouped in categories.

The most frequent words are organized into seven topics. Topics were grouped into subcategories and categories by meaning and common characteristics. Three categories were developed and are described in the following text. All answers are presented in Appendix L.

Individual person-directed care

One topic is focused on ***person-directed care***. Students describe that nurses' roles are to advise and understand students, and also to show an interest in them. Students said that s nurse's role is:

"*To advise us as much as possible*" (answer no. 23).

They also stated that:

> "*she understands and respects his opinion and feelings*" (answer no. 13), and "*you can ask her whatever you are interested in and she will try to answer your question as much as possible. You should not be ashamed to ask what interests you*." (answer no. 49).

The next topic refers to the ***individual approach to care for adolescents and patients***. Students pointed out that it is important that nurses:

> "*talk to the person individually*" (answers no. 25, 107, 173, 466, 689, 1226).

They state that nurse:

> "*finds a disease, talks to a patient about mental health*" (answer no. 60) and "*she takes care of patients of all ages and if she does a good job, the patient is also feeling well*" (answer no. 109).

Educational role of nurses

Findings are referring to the next topic named ***nurse's professional knowledge***. Students think that a nurse:

> "*has the knowledge that can help an adolescent*" (answer no. 169).

Moreover, another student added:

> "*Because she has more experience and knowledge, she can advise us wisely and help us in our decisions, because we young people often find ourselves in situations where we do not know how to go forward*" (answer no. 316).

They also said that nurse has an important role as:

> "*we can rely on professional opinion*" (answer no. 434).

They also see nurse as someone who assist patient (answers no. 22, 264, 358), adolescents (answers no. 76, 229, 414, 459, 460, 520, 539, 1189, 1187) and physicians (answers no. 324, 805, 1288).

Another topic refers to the ***important role of nurses*** in the support of adolescents' mental well-being. Students described that:

> "*nurse plays an important role as she affects the adolescent and can help him or her with problems*" (answer no. 648).

The other students said:

> "*she has a quite important role as she can advise them*" (answer no. 544) and "*that the nurse has a big role to play*" (answer no. 83).

Students also added:

> "S*he plays a big role because you can't always talk to your parents about these things*" (answer no. 433) and "*you can easily talk to your nurse about things that you cannot with your parents*" (answer no. 461).

Therapeutic interpersonal relations

The next topic refers to the ***educational and therapeutic role of nurses***. A nurse is approaching students in interpersonal relationships when talking to them and giving them useful information through an explanation. Many of the students emphasized that the nurse's role is to talk to students and to discuss their concerns:

> "*To talk and take action as needed*." (answer no. 8), "*To talk to the adolescent and try to help him if he has a problem*" (answer no. 77). "*She is ready to talk to adolescents and explain to them why they feel as they feel*" (answer no. 515).

She also gives adolescents advice, as they stated:

> "*To make us aware of a good and healthy lifestyle*" (answer no. 30) and "*Suggests a healthy life (sports activities…)*" (answer no. 31).

A good interpersonal relationship based on mutual trust is of key importance as stated by students:

"*We can trust her; she answers so that she will be good for us as she knows a lot about adolescent problems*" (answer no. 37). The nurse has "*a calming and therapeutic role*" (answer no. 1365).

Moreover, ***problem-based communication*** between students and nurses is identified as the fourth topic. It is important that students can express their opinion or concern and to be able to discuss it with a nurse, because students pointed out:

"*She can change our opinions, reflections and actions*" (answer no. 3) and "*She can change our opinions and certain things and make it easier for us to grow up*." (answer no. 6).

The final topic is focused on ***nurses' relationship with adolescents in correlation with their mental well-being***, which must be individual (answers no. 25, 107, 173, 466, 689, 1226) and trusting (answers no. 149, 154, 203, 206, 258, 369, 375, 601, 640, 689). A nurse has an important role in supporting an adolescent's mental well-being:

"*because she is a person we can trust and know that she will not tell anyone, she will make things easier for us*" (answer no. 149).

Moreover, the student added:

"*I think that she should individually devote herself to the patient (individual), offer him at least 5 minutes more time, and listen to him. Of course, it is also important for the patient to believe that she is trying to foster a loving, trusting relationship. I think that there is too little talk about mental health, and many eliminate people with mental illness from society, saying they are "dangerous, weird". Which is very wrong*." (answer no. 689).

Findings from this open-ended question suggest the importance of nurses in maintaining students' mental well-being. Students are of the opinion that nurses have professional knowledge in the field of their mental well-being. Nurses should perform person-directed care and have an educational role. They also stated that nurses should establish therapeutic interpersonal relations with students.

5.3 The qualitative part of the main research

Focus group questions were developed based on the quantitative part of the results. The core category was developed and named “Adolescents interpersonal therapeutic relationship”. Four categories were developed based on the results and common subcategories: understanding of adolescents’ mental well-being; adolescents’ mental well-being in correlation with interpersonal relations; factors and people that influence adolescents’ mental well-being and the role of RNs in supporting adolescents’ mental well-being (Table 5.20).

Table 5.20: Categories and subcategories from focus groups interviews

Categories	Subcategories
Understanding of adolescents mental well-being	A term related to the mental health disorders
	Way of thinking and living
	Positive term
Adolescents mental well-being in correlation with interpersonal relations	Family is the most important for primary school students in maintaining mental well-being
	Friends are the most important for secondary school students in maintaining mental well-being
	Mutual respect is needed in relationship with teachers
	Good communication, trust, openness, understanding, support, patience, awareness of differences, positive opinion, honesty, equality, and respect are principles of good interpersonal relations
	RNs have an important role
Factors and people that influence adolescents mental well-being	Safe living environment
	Acceptance by others
	Changes in values
	Lack of time for adolescents
	Modern technology
	High expectations by teachers
The role of RNs in supporting adolescents mental well-being	RNs therapeutic role
	Lack of discussion about adolescents’ mental well-being

Understanding of adolescents' mental well-being

All focus group participants were asked about their opinion on adolescents' mental well-being. The interviewer did not ask the participants to give the definition, but to state their opinion or perception on mental well-being.

Primary school students have had problems in understanding the mental well-being. At first, they described **mental health problems** as associations to mental disorder:

> "*Yeah, that's how (uhm[1]) ... how you're in the bad mood if you're depressed*." (PS1). PS3 agreed.

At the end of the discussion, they were asked again about mental well-being. Primary school students perceive mental well-being as **a way of living and thinking, and an absence of bad relations**.

> PS2 stated: "*Our thinking*".
>
> PS4 added: "*Absence of quarrels. If you don't fight."*
>
> PS7: "*Worldview*."
>
> PS4: "*How do you live, what motivates you, if anything motivates you".*

On the other hand, secondary school students stated that mental well-being is a **positive term** and is closely related to mental health, everyday well-being, reaction to certain situations, freedom to enjoy certain situations and self-image. SS1 described mental well-being as:

> *"Basically ... we are all energies, the body is itself ... the body, but yes basically yes, we work with it ourselves, otherwise we are all energies. Everyone has their own energy."*

[1] Filler word, filled pause

SS2 added:

"How do you react to certain situations, self-image ..."

Parents agreed that adolescents' mental well-being is good but did not know how to describe their understanding of adolescent's mental well-being. Thus, their perception is not clear.

RNs agreed that adolescents' mental well-being is a positive term correlated with their living environment and social support:

"...basically I think mainly that they live in one secure, safe environment, home environment, that they are accepted as they are and that they can express their opinion without condemnation without anyone to point their finger at them, humiliate them, that they are accepted among their peers, that there is no peer violence (uhm) and above all that they get along with their parents because it all comes from the family." (RN1)

RN6 agreed and added:

"*That you have a good self-image. To feel good (noise) in your skin."*

A teacher agreed with the view of adolescents' mental well-being as a positive term and added:

"Yeah, to me that seems like a positive self-image. It seems to me that a child has empathy for others."

T2 added:

"Yes, that he knows how to set goals. Positive attitude towards life, towards yourself, towards others."

Finally, legislators were asked the same. Their opinion is that the adolescent's mental well-being is a positive term correlated with the mental health and mental disorders.

They also added:

"That is, I would say that it is basically primarily one positive dimension. That is, some characteristics, the ability of children and adolescents to function in

society and in themselves emotionally to exploit their potentials. They are associated with mental health or mental disorders, but it may be a separate concept that needs to be addressed and understood differently than what we have different in focus when talking about the social health of children and adolescents. That is, these are primarily developmental problems, learning difficulties, mental disorders of this and other categorizations. But like I said, it's still related to that. That is, mental well-being is a positive concept that encompasses essentially self-experience, self-esteem, emotional intelligence, and similar concepts as well as a view of society, one's place in society…" (I2)

I1 agreed and added:

"…it's a very important concept and a very important way of understanding and looking at, I will say, life, health, quality of life of adolescents. For me, too, this is broader than just health. It also covers some other aspects, social, … probably also financial, social, culture…"

Adolescents' mental well-being in correlation with interpersonal relations

In focus groups, both primary and secondary school students were asked about important people in their life when assuring mental well-being. Primary school students stated that the most important relationship is the relation with **family members** (especially the mother). When asked about relations with friends, they answered:

"*A little less*." (PS2)

When asked about teachers they once again agreed that family has the most effect on their mental well-being:

"*Most family relationships…"* (PS1)

RNs agreed that the biggest influence has the **family.** Moreover, **classmates** and **friends** have a big role in adolescents' mental well-being:

"*The first is definitely the family, isn't it? So... the wider environment, the classmates."* (RN2)

Primary school students also added that **friends** are the ones they trust and talk about problems:

> "*I usually talk to a friend first. And even if we all wrote the tests poorly, we know that it will be easier for my mother to understand, but if I write poorly, she is a little angrier."* (PS1).

On the other hand, secondary school students pointed out that family has an impact, but not as big as **friends**:

> *"But since family is only biologically connected, it's nothing, it's literally nothing, does not mean anything. I have a friend, two friends, that's how it is for me."* (SS2)

In relation to adolescents' mental well-being impacted by social support, SS6 stated that an adolescent has to process problems with oneself first:

> *"It's best to deal with yourself first. To be aware of yourself. No*2*, basically by being aware of your acts. You have to process it yourself."*

From the parents' perspective, **adolescents find friends more important than family members**, they stated:

> *"I think it's primary family, no, just (uhm) like the lady said, no, I think now the kids are at such age when (uhm) we aren't (uhm) ... from their point of view we are not in the first place for these children"* (P4)

When talking about good interpersonal relations, secondary school students stated that the relationship should be based on the following **principles of good interpersonal relations**: good communication, trust, openness, understanding, support, patience, awareness of differences, positive opinion, honesty, equality, and respect.

[2] Filler word and not negation

When asked about relations with the **teacher**, students stated that it is important that there is mutual respect:

"*They must have respect for each other*" (PS1)

and it depends on their opinion:

"*It kind of depends on what they think of us*." (PS4).

As described, adolescents' mental well-being is closely related to their relations with others. RN3 pointed out the role of the family:

"Absolutely, the family is the one that is the first cell and is involved and we missed a lot, and if we don't start working on it, in kindergartens, as we said before, we have missed generation."

RN3 opinion is similar to findings from primary and secondary school children:

"When they are quite small, maybe even more family, right? (everyone agrees, nods) But when they grow up and become teenagers, in fact, the family always... loses that influence. But there are friends, siblings, later partners, such as girls."

RN1 stated that **teachers** have a small role in providing adolescents with mental well-being, as they do not have much autonomy. RN1 also stated:

"Don't get involved in their work, because they went through education anyway, they have the knowledge, they gain experience with mileage, but more autonomy. Don't get involved in children's education."

Even though RNs have a significant role in adolescents' mental well-being, RNs reported that **RNs do not have appropriate knowledge** and additional educations is welcomed. RN6:

"We don't all have it. Those that work just as (name) specifically in such a clinical setting for sure."

Moreover, **RNs do not have possibilities to improve their knowledge**, yet they can learn a lot when working in a multidisciplinary team:

> *"Thank god we have such a working environment that we can get help from therapists and you have some interviews with them and you get some confirmation of what you can do. Although the working conditions (uhm) do not allow us to allow the nurses to work as completely as they would like because we do not have space."* (RN6)

In accordance with the adolescent opinion, RNs think that **people, in general, can talk to nurses easier than to doctors,** which may be the reason why adolescents perceive RNs as important persons in their life:

> *"It's easier to tell my nurse there, "I haven't gone to… I don't know…to poop for three days than to go to the doctor if he doesn't even look me in the eye, for example. I don't know. The sister is always that confidant."* (RN6)

Factors and people that influence adolescents' mental well-being

As stated, RNs agreed that adolescents' mental well-being is correlated with their living environment and social support. RNs emphasized that to maintain an adolescents' mental well-being it is important to provide **safe living environment**:

> *"...basically I think mainly that they live in one secure, safe environment, home environment..."* (RN1)

Also, RN1 added that it is important that adolescents are accepted by others. Nurses agreed that mental well-being is closely related to **good interpersonal relations and safety environment in which adolescents can express themselves and are accepted by others**. RN3 stated that an adolescent's mental well-being is when:

> *"an individual is capable, I don't know, of accepting criticism, that an individual is capable of cooperating with others ... (uhm) That an individual is also capable of (uhm) waiting a little, no, for one thing. (Uhm) Yes ... I will say that he also has confidence in himself, but yes, that these are not empty words, which for the most part is now all seemingly full of self-confidence,*

but in reality, they are very bad. (Uhm) And also being able to, I don't know, get a bad grade."

RN2 agreed with others and pointed out that **the generation has changed as well as adolescents' values**:

"*I agree with you here, but you know what I'm looking at here, no, because unfortunately, we notice something, no, that (uhm) there are practically no more of those values, some morals, no, some ethics, no. And (uhm) young people too little ... (uhm) this is basically, and this actually comes out of the family (uhm) that yes, these values simply no longer exist, no*."

RN1 agreed and also stated:

"*The actual situation, the real situation, no, these generations of children, no, the requirements. Because they live in a world where absolutely everything is allowed to them, right? They have no prohibitions, they have no commandments, right?"*

RNs pointed out that children are using mobile phones from an early age. They are of the opinion that **parents do not have enough time for them**:

"*What do we do when a child is restless at the age of two? Here is the phone, go play. What about at seven? We missed it! Give him the ball then, right?"* (RN2)

On the other hand, one parent stated that **technology is part of everyday life and that parents need to teach their children how to use it in a good way**:

"*I said, you see you can use the internet in a different way. You probably have to show the kid, too, no. Yes, it can also be done for good purposes, not just games, Instagram, Facebook, and I don't know*." (P4)

Parents also agreed that social media has an impact on adolescents' mental well-being, but not very big. They think that **if a parent communicates with their child about its positive and negative consequences, the adolescent can decide on their own if and how they will use the social media**. They also added that modern technology is one way of relaxing for the adolescent:

> "*It's really like the gentleman said, it's not from us because we didn't live that way, but today's world is set that way, no, and it's just maybe maybe, it's really a child's relaxation, right? That maybe that time he is disconnected, but he's in some unreal world, no, just those games, no, but he says to himself, here I do the way I want, no. There are no external influences here*." (P4)

Also, parents think that **teachers expect too much from children** and that both **parents and adolescents do not get appropriate and needed support** by teachers:

> "*My son had health issues (uhm) in third grade he got an epileptic seizure. And let's say here in the school I didn't get any support in the sense that it would be easier for him. It was harder for him."* (P5)

On the other hand, teachers often do not have the appropriate approach to adolescents. RN4 also pointed out that teachers are often too friendly with adolescents.

RNs were asked about their role in supporting adolescents with mental well-being. RN1 said:

> "*In general, I will say from the first visits to the counselling centre onwards, no, as far as talking to parents is concerned, no, health education work absolutely (uhm)."*

The role of RNs in providing adolescents mental well-being

Both primary and secondary school students were asked about nurses' role. Primary school students stated that they meet with a nurse only **when they are sick** or when performing **systematic health visits (health checks)** in school. Primary school students gave short answers, thus, some answers are just listed and not cited. Results are similar

to answers in the quantitative part of the research. Students stated that nurses **talk with students** (all primary school students), **help** (all primary school students), **care** (PS4), **calm down** (PS5), **understand**, **teach** and **advise** (PS4), give hope (PS7), and **speak positively** (PS5). Moreover, they agreed that **it is easier to talk to a nurse than to a doctor**.

Secondary school students agreed that nurse has a significant role **when more serious mental health problems occur**:

> "*I lean more towards friends. She just doesn't have any ... unless it's something more serious."* (SS1)

They also emphasized that nurse **has needed knowledge** and that in certain situations **it is easier to talk to a nurse than to a friend**:

> "*But sometimes it's also easier because she can't criticize you, because she doesn't know you*." (SS3).

SS2 added that:

> "*…it just depends on the situation. If it is more serious, the point is that you need someone who knows how to deal with it and knows how to help you."*

On the other hand, SS5 states:

> "*Maybe it is worse, because you're ashamed to talk to someone you don't know*."

It is evident that primary and secondary school students perceive RNs as important persons in maintaining their mental well-being. RN roles are different: a foreign person, source of information, teacher, leader, counsellor, and expert. **RN role is also therapeutic** as she performs individual talks with adolescents, helps them, advises them, and performs other activities to support their mental well-being. Identified roles are in accordance with nurses' roles described by Peplau (1952, pp. 43–72).

Secondary school students stated also that there is a **lack of discussion about mental well-being** while having systematic health visits by nurses.

Parents were asked about their opinion on the role of healthcare system and possible suggestions for improving an adolescent's mental well-being. They did not comment the healthcare system, because they were of opinion that family and teachers influence adolescents more.

Teachers were also asked about their opinion on RNs' role in maintaining adolescents' mental well-being. They agreed that RNs do not spend much time in schools, thus, their role is not big:

> "They, for example, had a systematic health visit this year. Well, they have those conversations systematically… on certain topics, but there is certainly not enough of that… that this would have an impact on them. That may be a confirmation of something or they may indicate some things that would interest them. The question is what they can find out in 45 minutes." (T2)

RN2 suggested that RNs should improve their knowledge on adolescents' mental well-being to get more competencies:

> "…*competencies of nurses, no, but at the same time, of course, probably also some specialization.*"

RNs stated that there is a way for legislators to improve adolescents' mental well-being. RN1 pointed out:

> "*Adopt the Mental Health of Children and Adolescents Act as soon as possible. Priority*!"

Legislators were then asked about their opinion on the act specially with focus on adolescents' mental well-being. All agreed with L1 who stated:

> "*Usually, the Mental Health of Children and Adolescents Act, like the law for adults, will usually address not well-being and promotion and prevention, but usually such very critical situations or rather serious problems, cases*

(uhm) and protocols cooperation so that yes (hehe[3]) the Law itself would not have so much promise."

Adolescents think that family, friends, teachers, and RNs have an important role when maintaining their mental well-being. For primary school students, their family has the greatest role, whilst secondary school students think that the greatest role have friends. Parents shared the same opinion. Moreover, adolescents think that nurses have an important role in maintaining an adolescent's mental well-being because he/she is an expert in the field of health promotion. They also stated that not enough time is devoted to the discussion on mental well-being. RNs shared the same opinion. Also, nurses are welcomed in school to perform classes and workshops for adolescents, parents, and teachers as stated by both teachers and parents. Students reported that relationships with peers and teachers are very important as they spend a lot of time in school. Teachers stated that they see themselves as role models for students. The results of the quantitative part of the research supplemented the results from the quantitative part of the research. A more in-depth discussion about the integration of quantitative and qualitative results is presented in the following chapter.

5.4 Integration of findings

In table 5.21 findings from the systematic literature review, quantitative part of the research, open-ended question and from the qualitative part of the research are summarised. The table presents the process of coding.

[3] Laughs

Table 5.21: Summarised findings

Literature review		Quantitative part of the research		Open-ended question		Qualitative part of the research	
Categories	**Subcategories**	**Categories**	**Subcategories**	**Categories**	**Subcategories**	**Categories**	**Subcategories**
Psychological well-being	Quality of life	Social support has an important role in maintaining students' mental well-being	Students' mental well-being and social support differ between various demographic characteristics	Individual person-directed care	Individual approach to care for adolescents and patients	Understanding of adolescents' mental well-being	A term related to the mental health disorders
					Person directed care		Way of thinking and living
					Nurses' professional knowledge		Positive term
	Mental well-being			Educational role of a nurse	The important role of a nurse	Adolescents' mental well-being in correlation with interpersonal relations	Family is the most important for primary school students in maintaining mental well-being
				Therapeutic interpersonal relations	Problem-based communication		Friends are the most important for secondary school students in maintaining mental well-being

Literature review		Quantitative part of the research		Open-ended question		Qualitative part of the research	
Categories	**Subcategories**	**Categories**	**Subcategories**	**Categories**	**Subcategories**	**Categories**	**Subcategories**
	Positive psychology				Educational and therapeutic role of a nurse		Mutual respect is needed in relationship with teachers
Subjective well-being	Positive climate				Nurses' relationship with adolescent in correlation with their mental well-being		Good communication, trust, openness, understanding, support, patience, awareness of differences, positive opinion, honesty, equality, and respect are principles of good interpersonal relations
	Emotional well-being						RNs have an important role
	Emotional intelligence & emotional literacy		Social support impacts students' mental well-being			Factors and people that influence adolescents'	Safe living environment
	Social inclusion						Acceptance by others
							Changes in values

Literature review		Quantitative part of the research		Open-ended question		Qualitative part of the research	
Categories	**Subcategories**	**Categories**	**Subcategories**	**Categories**	**Subcategories**	**Categories**	**Subcategories**
						mental well-being	Lack of time for adolescents
							Modern technology
Psychosocial well-being	Physical activity						High expectations by teachers
							RN's therapeutic role
	Mindfulness					The role of RNs in providing adolescents' mental well-being	
							Lack of discussion about adolescents' mental well-being
	Problem-solving and stress reduction						
Adolescents' well-being consists of psychological well-being, subjective well-being, and psychosocial well-being.		*Social support has an impact on adolescents' mental well-being.*		Adolescents perceive RNs role as individual person-directed care, educational role, and therapeutic role.		**Adolescents understand that mental well-being is a positive term.** *Social support has impact on adolescents' mental well-being.* RNs have a role in maintaining adolescents' mental well-being. RNs' role is therapeutic.	

6 Interpretation and discussion

In the following chapter, results from the mixed methods study are integrated. Findings from the quantitative part of the study are supplemented with findings from the qualitative part of the research and discussed thorough the justification of studied subject, methodology and methods, research instruments, and answering the research question and evaluating the research hypotheses.

6.1 Justification of studied subject

To perform extensive research on adolescents' mental well-being support, both the adolescents' mental well-being and social support need to be understood well.

Research in the field of mental well-being has been growing in recent decades worldwide (Andresen & Betz, 2014; Fattore, et al., 2019; Walsh, et al., 2020). Moreover, it is known that the perception of mental well-being differs among different populations. The Government Office for Science (2008, p. 10) defined mental well-being as "a state, in which the individual can develop his/her potential, work productively and creatively, build strong and positive relationships with others, and contribute to his/her community". Definitions of well-being often include concepts such as happiness, life satisfaction, positive mental health, quality of life, social capital, mental capital, and human functioning (Linton, et al., 2016; Salvador-Carulla, et al., 2014). Stewart-Brown & Janmohamed (2008) state that mental well-being is covering the subjective experience of happiness and life satisfaction, and positive psychological functioning, good relationships with others, and self-realization. Sarriera & Bedin (2017, pp. 10–16) proposed a multidimensional approach to well-being that combines psychological well-being (self-concept, life purpose, spirituality), subjective well-being (positive effects, negative effects, life satisfaction, emotional intelligence), socio-community well-being (human rights, sense of community, environment satisfaction) and psychosocial well-

being (interpersonal relationship, leisure, technology use). Multidimensional well-being integrates different concepts, aspects, and perceptions, and gives a unique holistic person-centred approach (Cresswell-Smith, et al., 2019). As in the definition, the author emphasizes the importance of interpersonal relations with others when maintaining mental well-being, which is also supported by the work of Peplau (1952). Peplau (1952) described nursing as “an interpersonal process of therapeutic interactions between an individual who is sick or in need of health services and a nurse especially educated to recognize, respond to the need for help”.

As for the definition of mental well-being, there are many different definitions of social support. Most of the definitions emphasise the existence of social relationships which may vary by structure, strength, and type. Whether a relationship is supportive depends on reciprocity, accessibility, and reliability (Williams, et al., 2004). In the Youth Wellbeing Northern Ireland Survey, carried out among more than 3 000 children and adolescents’, authors found that the most common source of support for their mental health are family and friends (16.1%), followed by teachers (14.5%), and someone from healthcare (8.0%) (Bunting, et al., 2020). It is evident that better social support results in the better mental well-being of adolescents (Arslan, 2018; Poudel, et al., 2020; Ringdal, et al., 2020; Werner-Seidler, et al., 2017) showing that those two terms must be considered together. However, adolescent mental well-being is still not largely researched in correlation with social support (Walsh, et al., 2020). Thus, the conducted research is justified and presents new knowledge in the field of adolescents’ mental well-being in correlation with social support.

6.2 Justification of used methodology and methods

There is an expansion of the mixed methods movement and popularity of the grounded theory across different disciplines (Guetterman, et al., 2019). Johnson, et al., (2010b) named this kind of research “the mixed-methods-grounded theory”. They also stated that grounded theory fits remarkably well with mixed-methods research. The core step of it is the integration or mixing of the quantitative and qualitative methods (Creswell & Plano Clark, 2011). Howell Smith, et al. (2020) stated that mixed methods and grounded

theory method are complementary. Also, conceptualizations of grounded theory are open to both quantitative and qualitative data source. GTM is a widely used approach within the social sciences and nursing. More specifically, GTM has been used in the field of adolescent mental health (Green, 2012) and adolescents' social support as well (Ashbourne, 2007; Ashbourne & Baobaid, 2014; Carlson & Hall, 2014; Wozniak, 2015). GTM was not widely used in the field of adolescents' mental well-being in correlation with social support. As evident from this study, quantitative methods were used to explore students' mental well-being state, their social support, and opinion about nurses' role. Qualitative research methods were used to explain the perception of adolescents, teachers, parents, RNs, and legislators about adolescents' mental well-being, factors contributing to adolescent's mental well-being, social support, and the role of RNs in detail. Using qualitative research methods, findings from the quantitative part of the research were explained more clearly. It is shown that GTM is an appropriate approach to get wider knowledge about adolescents' mental well-being in correlation with social support. All steps of GTM were considered while conducting the research. Valid and new knowledge was obtained. Moreover, to conduct extensive research, valid instruments (questionnaires and semi-structured interview guides) and data collection methods (survey and focus groups) were used. In the following chapter, the used instruments are discussed.

6.3 Justification of research sample

Research sample and sampling method are important components in research and need to be carefully planned and implemented (Gray & Grove, 2021). To determine the sample size for the quantitative part of the research, a pilot study was conducted. The expected number of respondents for the pilot study was 140 to assess item and scale validity. The inclusion criteria in the study were taken into account and described in detail in chapter 3.3. The population was selected based on the systematic review, analysis, and synthesis of the literature. Random sampling and included all available students from 22 primary schools (5.0% of all elementary schools) and 12 secondary schools (5.0% of all secondary schools) in Slovenia for the purposes of the expected sample. Random sampling was chosen to represent student characteristics in the wider

student population. Because students were chosen at random, everyone in the large population set has the same probability of being selected. Williamson (2003) states that randomization techniques are more appropriate to generate measures of statistical significance than 'traditional' p-values. The envisaged final number of participants was determined by the size of the total population of students, degree of confidence, and margin of error (Qualtrics, 2018). The sample size was increased to avoid the risk of attrition and drop-out during the study. The research involved primary school (from the 5th to the 9th grade) and secondary school students (from the 1st to the 4th grade). The ethical permission was obtained from the Slovenian National Medical Ethics Committee and consent received from the schools or principals to carry out the research. Before the research, consent from parents was sought. A total of 2 967 adolescents participated in the research.

In the qualitative part of the research, theoretical sampling was used to gain a broad view of the studied concept of interest groups. Theoretical sampling is usually used in GTM to advance development of a selected theory thought research process (Strauss & Corbin, 1998; Gray & Grove, 2021). The sample was selected based on the knowledge of adolescents' mental well-being to get the most usable information about adolescents' mental well-being in correlation with social support. The recommended size of the focus group is six to ten participants (Klemenčič & Hlebec, 2007), so eight participants were asked to participate in each focus group. The study inclusion criteria were taken into account and described in detail in chapter 3.3. Focus groups were conducted among sixteen adolescents (eight primary school students and eight secondary school students), eight parents, six teachers, six RNs, and three legislators who consented to participate in the survey.

6.4 Justification of research instruments

Although adolescents' mental well-being and their social support are of great importance, there is a lack of research that investigates properties, relevant use, and acceptance of measures (Rose, et al., 2017). Researchers who investigated the measurement properties concluded that measures are either low quality (Bentley, et al.,

2019) or have no sufficient psychometric evidence available (Deighton, et al., 2014). In light of this, both scales used in the data collection process were translated and validated.

The WEMWBS questionnaire was translated and validated in different countries and different settings (Cilar, 2017; Cilar, et al., 2020b). The WEMWBS homogeneity coefficient was 0.427 (*se* = 0.009) which confirms the unidimensionality of the WEMWBS scale. The WEMWBS *infit* minimum was 0.663 and maximum 1.300, when *outfit* minimum was 0.657 and maximum was 1.434. They are both in the standard accepted range (0.5–1.5) (Gazibara, et al., 2019). The exploratory factor analysis suggested a one-factor structure of the WEMWBS (Lloyd & Devine, 2012; Tennant, et al., 2007). CFA was conducted separately for primary school students and secondary school students for WEMWBS. The CFA on results in primary school students showed good fit according to user model versus baseline model metrics (*CFI* = 0.937; *TLI* = 0.0.926) and good fit in root mean square error-based metric (*RMSEA* = 0.064; $p(\chi^2)$ < 0.001). The CFA on results in secondary school students showed good fit according to user model versus baseline model metrics (*CFI* = 0.920; *TLI* = 0.905) and good fit in root mean square error-based metric (*RMSEA* = 0.078; $p(\chi^2)$ < 0.001). Both results are better than in CFA conducted on common sample. The root mean square error (RMSEA = 0.0502) in the original study by Tennant, et al. (2007) was lower than expected. Analysis in our study suggested a one-factor structure of the WEMWBS, which is the same as in the original study (Tennant, et al., 2007; Cilar, et al., 2020b). One-factor structure of the WEMWBS was reported in other studies as well (Hoffman, et al., 2019; Lopez, et al., 2013). Cronbach's alpha for the WEMWBS scale was 0.82 (0.88 in pilot study), which demonstrates strong internal consistency. Cronbach's alpha in the original study was 0.89 for the student sample and 0.91 for the population sample (Tennant, et al., 2007). The content validity was assessed by using a criterion of acceptability, coefficient alpha, and multirater kappa coefficient. Both I-CVI and S-CVI are assessed as acceptable.

The KIDSCREEN-27 questionnaire is an instrument widely used for monitoring the quality of life of children and adolescents and relations with others. The conducted analyses show that the Slovenian version of the questionnaire has overall good

psychometric properties for use among adolescents. In the current study, the CFA for KIDSCREEN-27 showed average fit according to user model versus baseline model metrics (*CFI* = 0.847; *TLI* = 0.862) and good fit in root mean square error-based metric (*RMSEA* = 0.072; $p(\chi^2)$ < 0.001). The CFA on results in primary school students showed average fit according to user model versus baseline model metrics (*CFI* = 0.863; *TLI* = 0.847) and average fit in root mean square error-based metric (*RMSEA* = 0.072; $p(\chi^2)$ < 0.001). The CFA on results in secondary school students showed average fit according to user model versus baseline model metrics (*CFI* = 0.818; *TLI* = 0.797) and average fit in root mean square error-based metric (*RMSEA* = 0.086; $p(\chi^2)$ < 0.001). Both results are lower than in CFA conducted on the common sample. KIDSCREEN-27 subscales have an *infit* range between 0.540 and 1.061, and *outfit* between 0.545 and 1.101. Values are similar to those in the pilot study and are acceptable for scale. Similar results were reported by Velez, et al. (2016). Parallel analysis based on tetrachoric correlations suggested eight factors (six in pilot study) and six components (four in pilot study) for the KIDSCREEN-27 scale. Research conducted among 13 European countries (Ravens-Sieberer, et al., 2007) and another conducted among Chilean adolescents (Molina, et al., 2014) found a five-factor model acceptable. Cronbach's alpha of KIDSCREEN-27 was 0.93 (in both pilot and main study) and is interpreted as very good (DeVellis, 2016). After both psychometric testing (in pilot study and main quantitative part of the study), it can be concluded that both scales were appropriate to use among Slovenian adolescents.

A semi-structured interview conducted in focus groups was used to obtain qualitative data. Semi-structured interviews were already used in research about adolescents' mental health (Ferreira, et al., 2020; Wang, et al., 2020) and social support (Ferreira, et al., 2020; Latha & Reddy, 2007). The rigor of data collection procedure fundamentally influences the results of the research. A semi-structured interview is a common data collection method, but there is a lack of research on the development of a semi-structured interview guide (Kallio, et al., 2016). In our study, a semi-structured interview guide was developed based on the results from the quantitative part of the research in order to supplement findings from the quantitative part of the research. Each semi-structured interview guide among different focus groups was focusing on the sample

related questions. Using that kind of approach, data on adolescents, parents, teachers, nurses, and legislators' perception on adolescents' mental well-being in correlation with social support was obtained. Thus, the chosen method is appropriate and got us a broad new knowledge in the field of adolescents' mental well-being in correlation with social support.

6.5 Answer to the research questions and research hypotheses

The main findings are that the mental well-being of adolescents correlates with the support of nursing and social environment, and the perception of this differs between adolescents, parents, teachers, RNs, and legislators. Adolescents' mental well-being differs between primary and secondary school students. Mental well-being and social support drop with students' age. A similar study conducted in Slovenia showed that the majority of adolescents are mentally healthy, and they have no mental signs or symptoms. Most Slovenian adolescents are satisfied with their lives and are more satisfied with life than their peers from other countries (Jeriček Klanšček, et al., 2015). Also, higher life satisfaction is reported by adolescents who report that their family is doing financially well, and who have good support from parents, peers and teachers. Researchers also concluded that research on positive mental health among Slovenian adolescents must be carried out in accordance with internationally comparable methodology for measuring positive mental health (Jeriček Klanšček, et al., 2018).

The main thesis of the doctoral dissertation was postulated that **the mental well-being of adolescents correlates with the support of family, and friends, and the perception of this differs between adolescents, parents, teachers, friends, RNs, and legislators.** The doctoral dissertation thesis was confirmed by the results of a mixed methods study. Results show that adolescents mental well-being is positively correlated with their social support. Students receiving more social support have better mental well-being. To explore out whether support by family, and friends is related to the mental well-being of adolescents was also one of the goals of the dissertation. The thesis refers to first research question stated as "**How do adolescents, parents, teachers, RNs, and legislators perceive adolescents' mental well-being support?".** This was also one of the

research goals. Primary school students stated that the most important persons in maintaining their mental well-being are parents. On the other hand, secondary school students stated that friends are more important than parents. Parents agreed that younger students' parents have a bigger role in their mental well-being while for older students this role is taken by friends. Students stated that teachers play an important role in maintaining their mental well-being. They reported that the relationship between student and teacher is respectful. Also, teachers stated that they see themselves as role models for students. Parents added that students spend a lot of time in school and that teachers do have a role in maintaining their mental well-being. Literature search and analyses have shown that there is evidence supporting this thesis. Chu, et al. (2010) conducted a literature review and meta-analysis and found that there is a small, yet positive association between social support and well-being. They also found that perceived support was strongly associated with well-being, social support was strongly associated with self-concept, support from teachers was strongly associated with well-being, and the association between social support and well-being increased with age. In their attempt to identify determinants contributing to adolescents' well-being, Tian, et al. (2013) reported a remarkable role of friends' support, whereas the parents' support was insignificant. The key findings for the two distinct cohorts are as follows. For the youth, global self-esteem was identified as a mediator between parent support and school well-being. For the senior adults, global self-esteem is deemed a mediator between friend support and school well-being. A similar study was conducted among 348 adolescents in Nepal. Authors reported that adolescents perceived friends support as more important than family support (Poudel, et al., 2020). Ciarrochi, et al. (2017) conducted a longitudinal study among 2 034 Australian adolescents to examine the implications of distinctive combinations of social support on adolescents' development. They found out that even though adolescents perceived low parent and teacher support, they felt strong peer support and average to above-average levels of well-being. As reported in our study, teachers have an important role in maintaining students' mental well-being. Similar results have been found in the systematic literature review conducted in 2018. In a study including 1 476 Chinese adolescents, authors reported

that school-related social support (teacher support and peer support) is correlated to adolescents' subjective well-being (Tian, et al., 2016). Aldridge & McChesney (2018) emphasize that there is an important association between the school climate and adolescents' mental health. Moreover, school climate includes social connectedness, safety, peer connectedness, and academic environment. Similar findings were reported in a meta-analysis on the relationships between social support and well-being among adolescents (Chu, et al., 2010). Our findings show that adolescents perceive RNs as important persons in supporting adolescents' mental well-being. Moreover, they emphasized that nurses should be involved more because of their supporting, teaching, and therapeutic role. These findings correlated with our research goal to explore how adolescents perceive the role of a registered nurse in supporting their mental well-being. Supporting results were found in a study conducted in Norway in 2019. The authors found that nurses report having limited impact on collaboration and being dependent on both the school principal and the teachers for achieving good collaboration in providing adolescent mental well-being (Granrud, et al., 2019). McAllister (2019) added that nurses need to step up to improve child and adolescent mental health and be involved in various areas, including school.

The second research question was: **"What are the obstacles faced by RNs in their work in the field of adolescents' mental well-being?".** RNs stated that there is not enough time to perform all preventive activities and to talk about all subjects. There is a lack of time to focus on an adolescents' mental well-being as well. Healthcare behaviours such as honesty, empathy, confidentiality, and respect contribute to adolescents' trust in the healthcare provider (Hardin, et al., 2020). Likewise, this study found adolescents stating that nurses have an important role in supporting adolescents' mental well-being. The students also described characteristics of good interpersonal relations such as trust, openness, understanding, awareness of differences, honesty, equality, and respect. Further, adolescents state that a nurse's role is diverse, from just talking to them to helping them in resolving health problems. In an integrative review, authors found that nurses, when working with adolescents in schools, perform referrals to other services, professions and do physical health care, perform motivational interviews, harm

reduction, cognitive behavioural therapy, group talks, and health education (Teixeira, et al., 2020). There are both room and need for implementing these activities in the Slovenian school environment. They could be performed by the RNs if they were employed as school nurses or if there were more time intended to perform these activities.

The third research question was: **"To what extent do adolescents receive support from RNs?".** Adolescents receive RNs' support only when RNs are performing regular systematic or purposive health visits in schools. Nevertheless, both students and teachers are of the opinion that RNs do have an important role in maintaining students' mental well-being. However, RNs do not devote much time to the promotion of mental well-being and the prevention of mental diseases. As McAllister (2019, p. 275) stated: "Nurses need to step up to improve child and adolescent mental health globally". School nurses are traditional practice around the world. Day (2019) discussed in her article the transformation and reshaping the school nurse role to fit 21st-century needs. She emphasized that everyone who works with young people must be aware of the threats to their emotional well-being. Moreover, she stated: "The time to do something is now, before it is too late." In the author's opinion, it is time to do more for Slovenian adolescents. The results underpin that both RNs and teachers see an opportunity to involve RNs more in the education system. Whether through health promotion seminars, workshops, or screening vulnerable adolescents for developing mental health problem. There is an opportunity to introduce school nurses to the education system in Slovenia.

Moreover, hypotheses were tested to determine which factors influence adolescents mental well-being. First hypothesis was set as follows: **Support for adolescents by the family is related to the mental well-being of adolescents**. The hypothesis was confirmed. Support for adolescents by the family is positively related to the mental well-being of adolescents. Other studies also show that the family has a vital role in supporting the adolescents' mental health (Betancourt, et al., 2017; Moore, et al., 2018; Žukauskienė, 2014). In a survey conducted in 2014 among European Union countries (one of them being Slovenia), adolescents assessed the support of the family, but they

did not investigate its connection with mental well-being, thus the direct comparison is not feasible. Studies investigating the link between social support and mental well-being show that there is a statistically significant correlation between them (Ravens-Sieberer, 2009; Ravens-Sieberer, et al., 2005). Relationships with family are important in improving adolescents' mental wellbeing and mental health (Moore, et al., 2018). Adolescents who have a caring female adult in the home and who are feeling connected to their community have fewer mental health problems (Cheng, et al., 2014). On the other hand, Flouri & Buchanan (2003) explored whether paternal support can protect adolescents against poor well-being. The study was conducted among 2722 British adolescents. Results showed that fathers' involvement had a stronger effect on adolescents' well-being. Ronen, et al. (2016) reported that subjective well-being lowers with age. The same findings are reported in our study. Moreover, adolescents who experienced any kind of family crisis have better self-control skills. Higher levels of family support are associated with better adolescent's self-perception and lower levels of mental health problems (Wang, et al., 2019). Bireda & Pillay (2018) pointed out the importance of open parent-child communication for adolescents' mental well-being. Communication is also at the core of good interpersonal relations proposed in the theory of interpersonal relations by Peplau (1952). Also, students in our study pointed out that communication is very important in establishing good interpersonal relations. The goal of this doctoral dissertation was to investigate whether support by family and friends is related to the mental well-being of adolescents. The first hypothesis was confirmed, thus the correlation between adolescents' mental well-being and family support was validated. Moreover, correlation between adolescents' mental well-being and friend support was explored while testing the second hypothesis.

The second hypothesis was set as follows: **Support for adolescents by friends is related to the mental well-being of adolescents**. The hypothesis was confirmed. Our results indicate that the support for adolescents by friends is positively related to the mental well-being of adolescents. In the HBSC survey in 2014, adolescents rated the support of friends as average (Pucelj, et al., 2016). It is evident from the results that adolescents perceive support by both family and friends as most important to maintain their mental

well-being. Primary school students who are younger perceive their parents as the most important persons in their life to maintain mental well-being. Secondary school students who are older perceive peers and friends as the most important people in maintaining mental well-being. Furthermore, both agreed that interpersonal relations must be based on mutual respect, equality, trust, understanding, openness, support, patience, awareness of differences, honesty, and good relations without conflicts. Pössel, et al. (2018) demonstrated that adolescents who are facing stress benefit more from family support compared to their peers without stress and that friends have a weaker presence in adolescent lives. Moore, et al. (2018) corroborated positive relations with family, friends, and teachers were associated with better subjective well-being and mental health symptoms. Surprisingly, various sources of perceived social support were refuted for their role in mediating the relationship between mental health problems for either boys or girls (Noret, et al., 2020). Significance was found in established relations between a perceived lack of support, perceived social support from friends and family, and mental health problems in girls. Gender differences were found in the research by Van Droogenbroeck, et al. (2018). Girls reported higher scores for psychological distress, anxiety, and depression than boys. Also, lower adolescents' social support is correlated with difficulties in identification of their feelings and emotion regulation (Karaer & Akdemir, 2019). A study from Walsh et al. (2020) included a large sample of adolescents from 37 countries to investigate contemporary risks, namely social support and contentious social-media use. In fact, the authors assert that prevention programs that aim at improving adolescent mental well-being should account for these contemporary risks when being designed.

The third hypothesis was set as follows: **The perceived level of support from the RNs differs between students by age and gender**. This hypothesis was refuted. The results at hand show that the level of support from the RNs does not differ between male and female students or between younger or older adolescents. Moreover, by answering the third research question the goal of exploring how adolescents perceive the role of a registered nurse in supporting mental well-being was achieved. As RNs do not interact with adolescents often, there are fewer opportunities to promote mental well-being and

perform preventive activities or interventions. Many effective interventions could be implemented in schools to promote adolescents' mental well-being (Cilar, et al., 2020a). In an attempt to enhance the effort, RNs should be involved more in schools. It is evident from the results that adolescents perceive the therapeutic role of RNs.

Moreover, students see RNs as very important persons in their life. This is in accordance with the results from focus groups where they stated that they only meet RNs when they are sick. Similarly, the majority of participants in the quantitative part of the study agreed that the RN has an important role even though they do not see him/her often. Nurse's help, advice, talk, and promote adolescents' health. They have an educational and therapeutic role. In accordance with the theory that guided this research—the theory of interpersonal relations—nurses have many roles. Peplau (1952) stated that nurses have the following roles: a foreign person, source, teacher, leader, compensator, counsellor, and expert. All roles have been described by adolescents, involved in this study. In the qualitative part of the research, adolescents explained that even though they do not meet nurses often, they think that nurses must have a lot of knowledge about adolescent mental well-being. However, adolescents emphasized that there is a need for more open and more frequent discussion about mental well-being. Parents, teachers, and RNs agreed with this as well. Parents added that teachers should expand their knowledge about adolescents' mental well-being. RNs agreed that teachers and parents should be further trained about adolescents' mental well-being. This could be achieved through specific training and workshops on adolescents' mental well-being which could be performed by RNs. Also, RNs stated that there is power in the hands of legislators to change the law concerning adolescent mental well-being.

The final goal was to develop a theoretical model for supporting adolescents' mental well-being in terms of nursing care based on obtained data. This is presented in the following chapter.

6.6 Interpersonal relationship model

In this chapter, the proposed model of adolescents' interpersonal relationship is presented. This study has shown that better social support is positively correlated with better mental well-being of adolescents. Younger adolescents share the opinion that family has the biggest role in maintaining their mental well-being, while older adolescents think that relationships with friends plays a bigger role. Good interpersonal relationships are based on trust, openness, understanding, awareness of differences, honesty, equality, and respect, as stated by students who participated in the current study. The results are in accordance with the theory of interpersonal relations by Peplau (1952) which lead this research. She stated that in order to progress in relations, nurses must greet patients with respect and interest.

A theoretical model for adolescents' interpersonal relations was developed based on literature search, analysis and synthesis, mixed methods study, and by taking all results together into account (Figure 6.1). The theoretical model was developed by also considering the theory of interpersonal relations (Peplau, 1952) and the multidimensional well-being model (Sarriera & Bedin, 2017). When interpreting interpersonal relations between adolescents and family, friends, teachers, and nurses, concepts of theory of interpersonal relations were taken into account. Dimensions of well-being (psychological, psychosocial, and subjective well-being) are incorporated from the multidimensional well-being model. The main category which was raised from the results of the mixed methods study is adolescents' mental well-being. This is explained in the following subchapter through three dimensions of well-being.

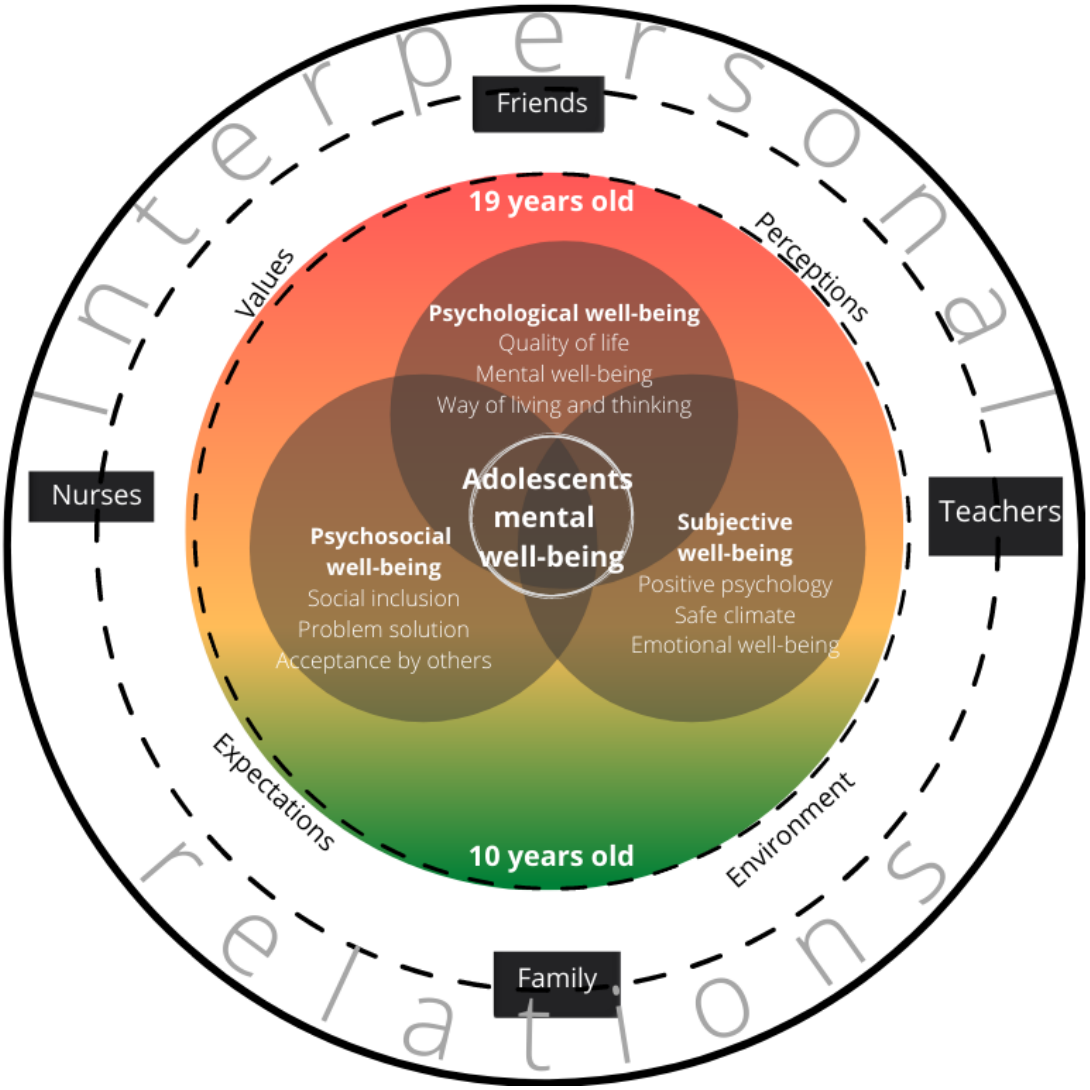


Figure 6.1: Interpersonal relationship model

6.6.1 Adolescents' mental well-being

The definition of adolescent's mental well-being was developed based on the results of the systematic review (Sarriera & Bedin, 2017) and results from a mixed methods study with regard to the theory that led the research (Peplau, 1952).

Three broad themes were identified in the systematic literature review (Cilar, et al., 2020a) which describe adolescents mental well-being and take into account the multidimensional approach to well-being (Sarriera & Bedin, 2017, pp. 10–16): psychological well-being, subjective well-being, and psychosocial well-being. To clarify the understanding of adolescents' mental well-being, adolescents participating in the mixed methods study were asked to explain their opinion on this. Younger adolescents

were not able to describe their opinion on adolescents' mental well-being, while older adolescents gave clear opinions of this. In general, adolescents often mix two terms—mental health and mental illness. This conceptual confusion is prevalent among adolescents worldwide (Armstrong, et al., 2000; Durham, 2000; Burns & Rapee, 2006; Leighton, 2009). Furthermore, older adolescents described adolescents' mental well-being as quality of life, way of thinking and living (**psychological well-being**), and a positive term which impacts their emotional well-being (**subjective well-being**). They stated that family and friends have an impact on their mental well-being. Also, a big emphasis was given to the acceptance of others involved in the interpersonal relations (**psychosocial well-being).** Based on the study results, the following definition can be proposed: "Mental well-being is a positive term which describes a positive state of an individual where he/she accepts himself/herself, can function in society, and can exploit their potentials. Aspects that constitute mental well-being are positive relationships with others, self-acceptance, culturally supported values, and expectations. The mental well-being of adolescent can be reached through interpersonal relations with others." Adolescents' understanding of mental well-being differ due to their values, perceptions, expectations, and environment. Mental well-being during adolescence is influenced by life experiences and relationships. Key protective factors include support by family members and feeling of connectedness, supportive peers' help and support, and supportive environment (WHO, 2016b).

While interpreting adolescents' mental well-being, several impactful factors should be taken into account. As evident, adolescents' mental well-being differs by age, gender, school year, high school programme, living environment and region. WHO (2016b) emphasised that mental well-being declines with adolescents age and is slightly worse in female than in male adolescents. Additionally, adolescents' mental well-being is better in those with better social support.

6.6.2 Impact of interpersonal relations on adolescents' mental well-being

The category of interpersonal relationships is listed as an external category because interpersonal relationships affect the adolescent's experiences of mental well-being and social support. It is evident that the adolescents' perception of important people in their life changes with their age. An interpersonal relationship is a relation between at least two people and should be based on support, trust, openness, communication, honesty, awareness of differences, equality, and respect. Those components are important in establishing therapeutic interpersonal relations (Peplau, 1952). Adolescents are in close relationship with family, friends and peers, teachers and nurses. The **family** plays an important role in an adolescent's life, especially in early adolescence (starting at the age of 10). With their choices and lifestyle, devoted time and communication, they can influence adolescents' values and further relationships with others. This was proven in other studies (Betancourt, et al., 2017; Moore, et al., 2018; Stafford, et al., 2016; WHO, 2016b; Žukauskienė, 2014). Family influence is of great importance in an early phase of adolescence, whereas friends have bigger importance in older adolescents' years (till 19 year of age). The importance of **friends'** support was also emphasized by Engels, et al. (2016). Tian, et al. (2013) reported that friends support is significantly related to adolescent's well-being and that for older adolescents' friends support is of higher importance than family support. Same was proven by Poudel et al. (2020). Ciarrochi, et al. (2017) found that adolescents feel strong peer support and average to above-average levels of well-being. Adolescents' mental well-being is also influenced by **teachers'** support. Similar findings were reported in the systematic literature review conducted in 2018. In a study including 1476 Chinese adolescents, authors reported that school-related social support (teacher support and peer support) was correlated to adolescents' subjective well-being (Tian, et al., 2016). A social support is strongly associated with self-concept, perceived support is strongly associated with well-being, support from teachers is strongly associated with well-being, and the association between social support and well-being increases with age (Chu, et al., 2010). Adolescents recognised the following **nurse** roles: a foreign person, source of information, teacher, leader, counsellor and expert. Similar nurses' roles were discussed

in the Theory of interpersonal relations (Peplau, 1952). As evident from the results, interpersonal relations have an important impact on adolescents' mental well-being. Similar studies which explored adolescents' views about nurse roles in supporting their mental well-being were not conducted, thus the comparison of our results with similar findings is not possible.

6.6.3 The role of RNs in providing adolescents mental well-being

Even though adolescents do not perceive RNs as very important persons in their life, they think that nurses have a lot of professional knowledge about mental well-being (expert). Students stated that a nurse is someone they do not know well (foreign/stranger). However, it is easy to talk to him/her because he/she encourages them to engage in healthy activities (leader). Nurses give students useful information (source/resource) and teach them about healthy lifestyle (teacher/health educator). Furthermore, students' opinion is that RNs support, care, help, advise (counsellor), and talk to adolescents (therapeutical role). Findings are in accordance with nurses' roles described by Peplau (1952). Peplau (1952) described that nurse roles change due to four phases: orientation, identification, interaction, and resolution. The first role during the orientation phase is the role of a stranger. In order to pass this phase, nurses must greet patients with respect and interest. In the identification phase, nurses become health educators, resource persons, counsellors, and care providers. According to nurses' opinion, nursing is a profession that, within the school health services, can identify and prevent mental health problems among adolescents, but collaboration with teachers and parents is crucial (Granrud, et al., 2019). Similar to the findings of this study, Puskar & Bernardo (2007) found that nurses' knowledge, skills, and abilities enable them to recognize mental health problems and recommend appropriate referral and follow-up.

Using therapeutic relations and communication techniques, nurses provide feedback to patients and improve relations. Nurses interact with patients and develop their relations (Peplau, 1952). In the resolution phase, the patient no longer needs professional services and gives up dependent behaviour (Peplau, 1952). The intensity of relationship which nurses develop with adolescents depends on the period of time they spend with

adolescents. More time should be devoted to nurses to perform holistic and adolescent-directed care. Nurses should perform individual person-directed care (Baldwin, 2002). RNs support adolescents' mental well-being. In adolescents' opinion, teachers and legislators have a minimal role in their life. However, RNs, parents, and teachers think that they could impact adolescents' mental well-being with the clarification of obligations, interventions, and measures in the formal law which would be specifically aimed at the mental health and mental well-being of children and adolescents. This is in accordance with the findings by Haddad (2010) and Skundberg-Kletthagen, et al. (2017). They also emphasized that "school nurses might be the 'best-placed' professionals to prevent and reveal mental health problems". RNs should be included in the holistic care for adolescents and recognised as important specialists with needed knowledge. The interpersonal collaboration between parents, education system, and health care system is needed (Bohnenkamp, et al., 2015). Adolescents are in everyday relations to people in a wider social environment. Thus, relations with others are also important and should be taken into account when discussing adolescent mental well-being.

Although the study findings are new and important, there are a few research limitations related to the pilot and both quantitative and qualitative part of the research that need to be considered when interpreting the results. These are discussed in the following chapter.

6.7 Research limitations

The conducted research is cross-sectional research which makes it impossible to determine the causal relationship between the phenomena. However, mixed method studies are mostly cross-sectional research, as their purpose is to obtain a different perspective of the researched phenomenon using different methods (Zheng, 2015). Only one repetition was used to determine the content validity of the WEMWBS questionnaire, while two repetitions of the assessment of content adequacy by experts are recommended. Most research using the same questionnaires used one repetition as well. Moreover, the stability of the questionnaires using a test-retest correlation was

not investigated. Due to a relatively small sample size of the pilot study, psychometric testing of both KIDSCREEN-27 and WEMWBS was repeated.

Some schools and participants were not responsive concerning the invitation to participate in the research; those were contacted twice. Some of them dropped out of the research, thus, new randomly selected schools were invited to participate in the research. As assumed, a focus group of legislators had limited participation due to different obligations. Moreover, there is a possibility that the questionnaires did not fully cover the researched problem, but we estimate that with the added open-ended question in the questionnaire, the participants were empowered to give their perceptions regarding the researched issues fully. The implementation of qualitative work using focus group interviews further expanded insight into the researched issue. There is an opportunity to research the reasons why adolescents' mental well-being decreases with age and other factors related to adolescents' mental well-being.

WEMWBS is a self-reported questionnaire measuring mental well-being in the past two weeks. KIDSCREEN-27 is a self-reported questionnaire measuring social support, meaning that participants may give socially desirable answers. The above research limitations should be taken into account when findings of this study are interpreted. Although there are a few limitations listed, the author believes that findings of this study provide reliable and valid results that contribute new knowledge and understanding in relation to adolescents' mental well-being.

6.8 Unique scientific contributions

The results of the doctoral dissertation will contribute to the development of knowledge in the field of mental well-being of adolescents as scientific evidence on the correlation between the support of the family, friends, teachers, and RNs, and the mental well-being of adolescents was presented.

The originality of the proposed topic of the doctoral dissertation is supported with the following arguments:

Relevance of the research problem

In Slovenia, the mental well-being of adolescents is poorly researched and studied. Furthermore, it is not explicitly explored what kind of influence the social support in ensuring the mental well-being of adolescents has. Likewise, little attention is devoted to perceiving the mental well-being of adolescents by parents, teachers, RNs, and legislators. The KIDSCREEN-27 questionnaire has not been used in combination with the WEMWBS questionnaire in Slovenia or other countries before. In this study, broader understanding of adolescents' mental well-being is given. The relationship between adolescents' mental well-being and social support is explored. Both questionnaires showed good psychometrics and are valid for usage among Slovenian adolescents. Furthermore, study findings are of great importance and relevance for practice, education, research, and administration.

The complexity of the research problem

To the best of the author's knowledge, no research has yet been conducted to investigate the relations between family, friends', and teachers' support and the mental well-being of adolescents. The validation process of both, the KIDSCREEN-27 and the WEMWBS questionnaire was performed. The questionnaires were selected based on literature analysis, due to methodological and substantive relevance, and helped achieve the research goals. In the survey, a representative sample of adolescents was included, as stratified sampling was used to ensure the inclusion of individuals from all statistical regions in Slovenia. This attention to detail means that the results can be generalized at the level of the entire population of adolescents in Slovenia.

Knowledge of the research

Based on the observations of the relations between family, friends', and teachers' support and the adolescent's mental well-being in the Slovenian environment, and perceiving the mental well-being of adolescents by adolescents, parents, teachers, legislators, and RNs, a model showing key areas that need to be considered when supporting adolescents' mental well-being based on the needs and wishes of adolescents and their immediate environment is proposed. A theoretical model for the support in the field of practice, education, research, and administration of nursing was

developed by taking into account concepts of the theory of interpersonal relations (Peplau, 1952) and multidimensional well-being (Sarriera & Bedin, 2017). The proposed model could be developed to include some actions that parents, friends, teachers, and RNs could undertake to support adolescents' mental well-being in the future.

7 Conclusion

In the following subchapter, fundamental findings, suggestions for improvements in the field of adolescents' mental health nursing, and contributions to the science, practice, education, and administration are described.

7.1 Fundamental findings

The fundamental finding of this study is that the mental well-being of adolescents correlates with the support of nursing and social environment, and the perception of this differs between adolescents, parents, teachers, RNs, and legislators. Adolescents' mental well-being differs between primary and secondary school students. Mental well-being and social support drop with students' age. Adolescents in primary school perceive interpersonal relationships with others differently than adolescents in secondary school. The most important persons for primary school students are family members, and friends for secondary school students. Both primary and secondary school students agreed that good interpersonal relationships are based on trust, support, mutual respect, openness, honesty, awareness of differences, communication, understanding, and equality. Support from family members is important as parents are their role models. In developing good interpersonal relationship between family members and adolescents, it is important that they communicate, devote time to each other, and understand each other. In relationships with friends, adolescents expect that these relations are based on mutual respect and trust. Adolescents think that nurses have an important role in maintaining adolescents' mental well-being because he/she is an expert in the field of health promotion. Nevertheless, too little time is devoted to the discussion on mental well-being. Nurses' role is to talk to adolescents, help them and care for them. Nurses could have an important role in supporting adolescents, when they have the necessary preparation, support, and the required commitment to partnership. Likewise, nurses are welcome in schools to perform classes and workshops

for adolescents, parents, and teachers. Teachers and RNs agree that upbringing is of key importance in adolescents' personality shaping. Teachers also added that they see themselves as role models. To ensure adolescents' mental well-being, it is important that all factors and people possibly impacting an adolescent's mental well-being are involved and taken into consideration.

7.2 Suggestions for improvements

Suggestions and implications for practice, research, education and administration for improvement of adolescents' mental well-being are developed based on the results from the mixed methods study and are described in the following text.

a) Practice

Adolescents, family members, and carers must be involved in decisions about adolescents' care to provide high-quality and person-directed care as adolescents perceive family members as important persons in their life. Moreover, as adolescents perceive RNs as important persons in supporting adolescents' mental well-being it is important to involve nurses in schools to ensure holistic and continuous care for adolescents who may develop mental health problems. Involving RNs in schools would provide proper mental health promotion, early recognition of mental health problems, early and appropriate actions, support for adolescents and parents, and reference of adolescents in need for other healthcare professionals. Ongoing and coordinated healthcare for adolescents for periods after a mental health problem appears or is under control must be provided. Furthermore, various options for adolescents and parents must be provided to get the needed help when faced with mental health problems. Help should already be offered when a student enters the school and through the end of his/ her education. Finally, both healthcare and educational institutions must ensure somebody adolescents can talk to who is able to help them if they struggle with financial problems, poverty, bad interpersonal relationships, social exclusion, troubles with learning, or other factors that may contribute to worsening mental well-being and mental health.

b) Research

Further research should be undertaken in this area and study limits taken into account to provide more insight into adolescents' mental well-being. Cross-sectional studies have many limitations which enable further exploration of causal relationships. This could include longitudinal or experimental studies. Further, research should focus on reasons why mental well-being worsens with age and which factors contribute to worsening of mental well-being. This could be done in future research by considering these study limitations regarding study design, data collection, and data analyses.

c) Education

Lifelong education is needed for both RNs and teachers to ensure up-to-date knowledge, effective care, and assistance for adolescents. More seminars could be offered to RNs and teachers on adolescents' mental well-being, mental health promotion, prevention of mental health disorders, and treatment of adolescents with a diagnosed mental health disorder. An interdisciplinary approach should be introduced to all participants already in educational institutions. Nursing and teaching students' curricula should involve subjects related to adolescent's mental well-being, interpersonal relations and preventive and promotive activities for maintaining the mental well-being of adolescents. Education should also be provided for parents and adolescents themselves.

d) Administration

An interdisciplinary approach must be considered when taking care of adolescents' mental well-being with the respect of social support. Parents, teachers, RNs, and other important persons, involved in an adolescent's life should be included in the interdisciplinary team.

The research findings are beneficial for researchers, academics, RNs, and all professionals working with adolescents. Most importantly, suggestions and implications should be most beneficial for adolescents.

References

Abdollahpour, E., Nejat, S., Nourozian, M. & Majdzadeh, R., 2010. The process of content validity in instrument development. *Iranian Epidemiology*, 6(4), pp. 66–74.

Adolescent Health Committee, 2003. Age limits and adolescents. *Paediatrics & Child Health*, 8(9), pp. 577-578.

Albreht, T. et al., 2016. Slovenia: health system review. *Health Systems in Transition*, 18(3), pp. 1-207.

Aldridge, J. M. & McChesney, K., 2018. The relationships between school climate and adolescent mental health and wellbeing: a systematic literature review. *International Journal of Educational Research*, 88, pp. 121-145.

Allan, G., 2003. Friendship. In: K. Christensen & D. Levinson, eds. *Encyclopedia of community: from the village to the virtual world*. Thousand Oaks (CA): Sage Publications, pp. 513–517.

American Psychological Association, 2002. *A reference for professionals: developing adolescents.* Washington: American Psychological Association.

Andersen, J. R. et al., 2015. Is the KIDSCREEN-27 a valid measure of health-related quality of life in 10-year-old Norwegian children? *Health and Quality of Life Outcomes*, 14(58), pp. 1-6.

Andresen, S. & Betz, T., 2014. Child well-being. Potenzial und grenzen eines konzepts. einführung in den thementeil. *Zeitschrift für Pädagogik*, 60(4), pp. 499–504.

Armstrong, C., Hill, M. & Secker, J., 2000. Young people's perceptions of mental health. *Children and Society,* 14(1), pp. 60-72.

Arslan, G., 2018. Social exclusion, social support and psychological wellbeing at school: a study of mediation and moderation effect. *Child Indicators Research*, 11, pp. 897–918.

Ashbourne, L. M., 2007. *A grounded theory exploration of the experience of time in parent-adolescent relationships: doctoral dissertation*. Ontario: University of Guelph, Department of Family Relations and Applied Nutrition.

Ashbourne, L. M. & Baobaid, M., 2014. Parent-adolescent storytelling in Canadian-Arabic immigrant families (part 1): a grounded theory. *Qualitative Report*, 19(30), pp. 1-21.

Association for Young People's Health, 2016. *"There for you": the role of parents in supporting young people with mental health problems: results of a survey.* London: Association for Young People's Health. [pdf] Available at: http://www.youngpeopleshealth.org.uk/wp-content/uploads/2016/11/AYPH-Parenting-briefing-11-nov-2016.pdf [Accessed 6. 10. 2019].

Babic, M. J. et al., 2016. Intervention to reduce recreational screen-time in adolescents: outcomes and mediators from the 'Switch-Off 4 Healthy Minds' (S4HM) cluster randomized controlled trial. *Preventive Medicine*, 91, pp. 50-57.

Bache, I., 2020. *Evidence, policy and well-being*. Cham: This Palgrave Pivot.

Baldofski, S. et al., 2019. Efficacy and cost-effectiveness of two online interventions for children and adolescents at risk for depression (E.motion trial): study protocol for a randomized controlled trial within the ProHEAD consortium. *BMC Trials*, 20(53), pp. 1-11.

Baldwin, L., 2002. The nursing role in out-patient child and adolescent mental health services. *Journal of Clinical Nursing*, 11(4), pp. 520-525.

Bannink, R. et al., 2014. Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescents' health: randomized controlled trial. *Journal of Medical Internet Research*, 16(5), p. e143.

Banos, R. M. et al., 2017. Online positive interventions to promote well-being and resilience in the adolescent population: a narrative review. *Frontiers in Psychiatry*, 8(10), pp. 1-9.

Barker, P., 2006. *Basic child psychiatry*. 7th ed. Oxford: Blackwell Science.

Bartram, D. J., Sinclair, J. M. & Baldwin, D. S., 2013. Further validation of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) in the UK veterinary profession: Rasch analysis. *Quality of Life Research*, 22(2), pp. 379–391.

Bartram, D. J., Yadegarfar, G., Sinclair, J. M. & Baldwin, D. S., 2011. Validation of the Warwick–Edinburgh Mental Well-being Scale (WEMWBS) as an overall indicator of population mental health and well-being in the UK veterinary profession. *The Veterinary Journal*, 187(3), pp. 397–398.

Bass, M., Dawkin, M., Muncer, S., Vigurs, S. & Bostock, J., 2016. Validation of Warwick-Edinburgh Mental Well-being Scale (WEMWBS) in a population of people using secondary care mental health services, *Journal of Mental Health*, 25(4), pp. 323-329.

Baydur, H., Ergin, D., Gerçeklioğlu, G. & Eser, E., 2016. Reliability and validity study of the KIDSCREEN health-related quality of life questionnaire in a Turkish child/adolescent population. *Anatolian Journal of Psychiatry*, 17(6), pp. 496-505.

Beck, C. T. & Gable, R. K., 2001. Ensuring content validity: an illustration of the process. *Journal of Nursing Measurement*, 9(2), pp. 201-215.

Bentler, P. M., 1990. Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), pp. 238–246.

Bentler, P. M. & Bonett, D. G., 1980. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), pp. 588–606.

Bentley, N., Hartley, S. & Bucci, S., 2019. Systematic review of self-report measures of general mental health and wellbeing in adolescent mental health. *Clinical Child and Family Psychology Review,* 22(2), pp. 225-252.

Berry, K. & Hunt, C. J., 2009. Evaluation of an intervention program for anxious adolescent boys who are bullied at school. *Journal of Adolescent Health*, 45(4), pp. 376–382.

Betancourt, T. S. et al., 2017. Family-based promotion of mental health in children affected by HIV: a pilot randomized controlled trial. *Journal of Child Psychology and Psychiatry*, 58(8), pp. 922-930.

Bireda, A. D. & Pillay, J., 2018. Perceived parent–child communication and well-being among Ethiopian adolescents. *International Journal of Adolescence and Youth*, 23(1), pp. 109-117.

Blei, D. M., Ng, A. Y. & Jordan, M. I., 2003. Latent dirichlet allocation. *Journal of Machine Learning Research*, 3, pp. 993–1022.

Boele, S. et al., 2019. Linking parent-child and peer relationship quality to empathy in adolescence: a multilevel meta-analysis. *Journal of Youth and Adolescence*, 48(6), pp. 1033-1055.

Bohnenkamp, J. H., Stephan, S. H. & Bobo, N, 2015. Supporting student mental health: the role of the school nurse in coordinated school mental health care. *Psychology in the Schools*, 52(7), pp. 714-727.

Bokhorst, C. L., Sumter, S. R. & Westenberg, P. M., 2010. Social support from parents, friends, classmates, and teachers in children and adolescents aged 9 to 18 years: who is perceived as most supportive? *Social Development,* 19(2), pp. 417-426.

Bond, L., 2004. The Gatehouse Project: can a multilevel school intervention affect emotional wellbeing and health risk behaviours? *Journal of Epidemiology & Community Health*, 58(12), pp. 997-1003.

Boone, W. & Rogan, J., 2005. Rigour in quantitative analysis: the promise of Rasch analysis techniques. *African Journal of Research in Mathematics, Science and Technology Education*, 9(1), pp. 25–38.

Bonhauser, M., 2005. Improving physical fitness and emotional well-being in adolescents of low socioeconomic status in Chile: results of a school-based controlled trial. *Health Promotion International*, 20(2), pp. 113-122.

Bračič, M., Roškar, S., Zager Kocjan, G. & Jeriček Klanšček, H., 2019. The prevalence and predictors of suicidal ideation among Slovene adolescents. *Community Mental Health Journal*, 55(7), pp. 1210–1217.

Brown, B. B., 2004. Adolescents' relationship with peers. In: A. M. Lerner & L. Steinberg, eds. *Handbook of adolescent psychology.* 2nd ed. Hoboken: John Wiley & Sons, pp. 363-394.

Brown, S. R., 1996. Q methodology and qualitative research. *Qualitative Health Research*, 6(4), pp. 561-567.

Bunting, L. et al., 2020. *The mental health of children & parents in Northern Ireland: results of the Youth Wellbeing Prevalence Survey*. Belfast: Youth Wellbeing NI.

Burckhardt, R. et al., 2015. A web-based adolescent positive psychology program in schools: randomized controlled trial. *Journal of Medical Internet Research*, 17(7), p. e187.

Burckhardt, R., Manicavasagar, V., Batterham, P. J. & Hadzi-Pavlovic, D., 2016. A randomized controlled trial of strong minds: a school-based mental health program combining acceptance and commitment therapy and positive psychology. *Journal of School Psychology*, 57, pp. 41-52.

Burns, J. R. & Rapee, R. M., 2006. Adolescent mental health literacy: young people's knowledge of depression and help seeking. *Journal of Adolescence*, 29(2), pp. 225–239.

Calear, A. L. et al., 2016. Cluster randomised controlled trial of the e-couch anxiety and worry program in schools. *Journal of Affective Disorders,* 196, pp. 210-217.

Care Quality Commission, 2018. *Are we listening? Review of children and young people's mental health services*. Newcastle upon Tyne: Care Quality Commission. [pdf] Available

at: https://www.cqc.org.uk/sites/default/files/20180308b_arewelisten_ing_report.pdf [Accessed 6. 10. 2019].

Carlson, K. & Hall, J. M., 2014. Preventing restraint and seclusion: a multilevel grounded theory analysis. *Sage Open*, 4(4), p. 2158244014556641.

Carter, P. J. et al., 2018. Happy thoughts: enhancing well-being in the classroom with a positive events diary. *The Journal of Positive Psychology*, 13(2), pp. 110-121.

Castellvi, P. et al., 2014. The Spanish version of the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) is valid for use in the general population. *Quality of Life Research*, 23(3), pp. 857–868.

Cerny, C. A. & Kaiser, H. F., 1977. A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research*, 12(1), pp. 43–47.

Centers for Disease Control and Prevention, 2000. *Measuring healthy days: population assessment of health-related quality of life.* Atlanta: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Adult and Community Health.

Cheng, Y. et al., 2014. The association between social support and mental health among vulnerable adolescents in five cities: findings from the study of the well-being of adolescents in vulnerable environments. *Journal of Adolescent Health*, 55(6), pp. 31-38.

Chenitz, W. C. & Swanson, J. M., 1986*. From practice to grounded theory: qualitative research in nursing*. San Francisco: Addison-Wesley Publishing Company.

Chiang-Hanisko, L. et al., 2016. Guidance for using mixed methods design in nursing practice research, *Applied Nursing Research*, 31, pp. 1-5.

Child, D., 1990. *The essentials of factor analysis*. New York: Cassell Educational.

Ciarrochi, J. et al., 2017. A longitudinal person-centered perspective on youth social support: relations with psychological wellbeing. *Developmental Psychology*, 53(6), pp. 1154-1169.

Child Public Health, 2011. *The KIDSCREEN-27: health-related quality of life screening instrument for children and adolescents*. [Online] Available at: https://www.kidscreen.org/english/questionnaires/kidscreen-27-short-version/ [Accessed 24. 5. 2018].

Chiumento, A. et al., 2018. A haven of green space: learning from a pilot pre-post evaluation of a school-based social and therapeutic horticulture intervention with children. *BMC Public Health*, 18(1), p. 836.

Christiansen, L. B. et al., 2018. Improving children's physical self-perception through a school-based physical activity intervention: the move for well-being in school study. *Mental Health and Physical Activity*, 14, pp. 31-38.

Chu, P. S., Saucier, D. A. & Hafner, E., 2010. Meta-analysis of the relationships between social support and well-being in children and adolescents. *Journal of Social and Clinical Psychology*, 29(6), pp. 624-645.

Cicchetti, D. V. & Sparrow, S. A., 1981. Developing criteria for establishing interrater reliability of specific items: applications to assessment of adaptive behaviour. *American Journal of Mental Deficien*cy, 86(2), pp. 127–137.

Cilar, L., 2017. *Duševno dobro počutje med študenti zdravstvene nege v Sloveniji in Severni Irski: magistrska naloga.* Maribor: Univerza v Mariboru, Fakulteta za zdravstvene vede.

Cilar, L. & Pajnkihar, M., 2020. Opis, analiza in vrednotenje teorije medosebnih odnosov Hildegard E. Peplau v pediatrični zdravstveni negi. *Obzornik Zdravstvene Nege*, 54(1), pp. 64-78.

Cilar, L., Pajnkihar, M. & Štiglic, G., 2020b. Validation of the Warwick-Edinburgh Mental Well-being Scale among nursing students in Slovenia. *Journal of Nursing Management*, 28(6), pp. 1335–1346.

Cilar, L. et al., 2020a. Effectiveness of school-based mental well-being interventions among adolescents: a systematic review. *Journal of Advanced Nursing*, 76, pp. 2023–2045.

Clarke, A. et al., 2011. Warwick-Edinburgh Mental Well-being Scale (WEMWBS): validated for teenage school students in England and Scotland. A mixed methods assessment. *BMC Public Health*, 11(487), pp. 1-9.

Clarke, A. M., Sixsmith, J. & Barry, M. M., 2015. Evaluating the implementation of an emotional wellbeing programme for primary school children using participatory approaches. *Health Education Journal*, 74(5), pp. 578-593.

Clifton, A., Hemingway, S., Felton, A. & Stacey, G. eds., 2018. *Fundamentals of mental health nursing: an essential guide for nursing and healthcare students.* Oxford: John Wiley & Sons.

Code of ethics in nursing and healthcare of Slovenia. Official Gazette of the RS, no. 71/14.

Code of Medical Deontology of Slovenia, 1992. Ljubljana: Medical Chamber of Slovenia.

Colarossi, L. G. & Eccles, J. S., 2003. Differential effects of support providers on adolescents' mental health. *Social Work Research*, 27(1), pp. 19-30.

Constitution of the Republic of Slovenia. Official Gazette of the RS, no. 33/91-I, 42/97 – UZS68, 66/00 – UZ80, 24/03 – UZ3a, 47, 68, 69/04 – UZ14, 69/04 – UZ43, 69/04 – UZ50, 68/06 – UZ121,140,143, 47/13 – UZ148, 47/13 – UZ90,97,99 in 75/16 – UZ70a.

Corbin, J. & Strauss, A., 2008. *Basics of qualitative research: techniques and procedures for developing grounded theory*. 3rd ed. Thousand Oaks (CA): Sage.

Corbin, J. & Strauss, A., 2015. *Basics of qualitative research: techniques and procedures for developing grounded theory*. 4th ed. Thousand Oaks (CA): Sage.

Corsano, P., Majorano, M. & Champretavy, L., 2006. Psychological well-being in adolescence: the contribution of interpersonal relations and experience of being alone. *Adolescence*, 41(162), pp. 341-353.

Council of Europe, 1997. *Convention for the protection of human rights and dignity on the human being with regard to the application of biology and medicine: Convention on human rights and biomedicine.* Oviedo: Council of Europe.

Crescentini, C., Capurso, V., Furlan, S. & Fabbro, F. 2016. Mindfulness-oriented meditation for primary school children: effects on attention and psychological well-being. *Frontiers in Psychology*, 7, p. 805.

Cresswell-Smith, J. et al., 2019. Determinants of multidimensional mental well-being in the oldest old: a rapid review. *Social Psychiatry and Psychiatric Epidemiology*, 54, pp. 135–144.

Creswell, J. W. & Plano Clark, V. L., 2011. *Designing and conducting mixed methods research*. 2nd ed. Thousand Oaks: Sage.

Cylus, J., 2015. *Analiza zdravstvenega sistema v Sloveniji: pregled izdatkov v zdravstvu*. Ljubljana: World Health Organization; European Observatory on Health Systems and Policies; Ministrstvo za zdravje Republike Slovenije.

Davis, L. L., 1992. Instrument review: getting the most from your panel of experts. *Applied Nursing Research*, 5(4), pp. 194-197.

Day, P., 2019. Should school nurses embrace new therapeutic approaches to enhancing emotional wellbeing? *British Journal of School Nursing*, 14(1), pp. 29-33.

Deighton, J. et al., 2014. Measuring mental health and wellbeing outcomes for children and adolescents to inform practice and policy: a review of child self-report measures. *Child and Adolescent Psychiatry and Mental Health*, 8(1), p. 14.

Demaray, M. K. et al., 2005. The relationship between social support and student adjustment: a longitudinal analysis. *Psychology in the Schools,* 42(7), pp. 691–706.

Department of Health & Department for Education, 2017. *Transforming children and young people's mental health provision: a green paper*. London: APS Group.

Devcich, D. A., Rix, G., Bernay, R. & Graham, E., 2017. Effectiveness of a mindfulness-based program on school children's self-reported well-being: a pilot study comparing effects with an emotional literacy program. *Journal of Applied School Psychology*, 33(4), pp. 309-330.

DeVellis, R. F., 2016. *Scale development: theory and applications*. 4th ed. London: Sage publications.

Dima, A., 2018. Scale validation in applied health research: tutorial for a 6-step R-based psychometrics protocol. *Health Psychology and Behavioural Medicine*, 6(1), pp. 136-161.

Dodge, K. A. et al., 2015. Impact of early intervention on psychopathology, crime, and well-being at age 25. *American Journal of Psychiatry*, 172(1), pp. 59-70.

Dolan, P. & Metcalfe, R., 2012. Measuring subjective well-being: recommendations on measures for use by national governments. *Journal of Social Policy*, 41(2), pp. 409–427.

Donev, D., Kovacic, L. & Laaser, U., 2013. The role and organization of health systems. In: G. Burazeri & L. Zaletel Kragelj, eds. *Health: systems - lifestyle - policies: a handbook for teachers, researchers and health professionals.* Lage: Jacobs Publishing Company, pp. 4-14.

Dong, A. et al., 2016. Translation and validation of a Chinese version of the Warwick–Edinburgh Mental Well-being Scale with undergraduate nursing trainees. *Journal of Psychiatric and Mental Health Nursing*, 23(9-10), pp. 554–560.

Durham, J., 2000. *Asian young people's attitudes towards mental health. Unpublished Report*. Leicester: University of Leicester.

Duthely, L. M., Nunn, S. G. & Avella, J. T., 2017. A novel heart-centered, gratitude-meditation intervention to increase well-being among adolescents. *Education Research International*, 2017(4891892), pp. 1-12.

East, P. L., 2009. Adolescents' relationships with siblings. In: R. M. Lerner & L. Steinberg, eds. *Handbook of adolescent psychology*. Hoboken: Wiley, pp. 43-73.

Elflein, J., 2020. *Statista*. [Online] Available at: https://www.statista.com/statistics/429684/healthcare-expenditure-as-a-share-of-gdp-in-slovenia/#statisticContainer [Accessed 25. 12. 2020].

Elfrink, T. R. et al., 2017. Positive educative programme: a whole school approach to supporting children's well-being and creating a positive school climate: a pilot study. *Health Education*, 117(2), pp. 215-230.

Emerson, L.-M., Rowse, G. & Sills, J., 2017. Developing a mindfulness-based program for infant schools: feasibility, acceptability, and initial effects. *Journal of Research in Childhood Education*, 31(4), pp. 465-477.

Engels, M. C. et al., 2016. Behavioral engagement, peer status, and teacher–student relationships in adolescence: a longitudinal study on reciprocal influences. *Journal of Youth and Adolescence*, 45(6), pp. 1192-1207.

Erikson, E. H., 1995. *Childhood and society*. London: Vintage.

European Network of Ombudspersons for Children, 2018. *Child and adolescent mental health in Europe*. [pdf] Available at: https://www.defenseurdesdroits.fr/ sites/default/files/atoms/files/rapport-enoc-gb-num-05.09.18.pdf [Accessed 19. 11. 2019].

Evers, K. E. et al., 2007. Trans theoretical-based bullying prevention effectiveness trials in middle schools and high schools. *Educational Research*, 49(4), pp. 397-414.

Family Code, 2017. Official Gazette of the RS, no. 15/17, 21/18 – ZNOrg in 22//19.

Farias Júnior, J. C. et al., 2017. Reproducibility, internal consistency, and construct validity of KIDSCREEN-27 in Brazilian adolescents. *Cadernos de Saude Publica*, 33(9), pp. 1-14.

Fattore, T., Fegter, S. & Hunner-Kreisel, C., 2019. Children's understandings of well-being in global and local contexts: theoretical and methodological considerations for a multinational qualitative study. *Child Indicators Research*, 12(2), pp. 385-407.

Feldman, R., 2013. Techniques and applications for sentiment analysis. *Communications of the ACM*, 56(4), pp. 82-89.

Felton, A., Stacey, G., Hemingway, S. & Clifton, A., 2018. What is mental health? In: A. Clifton, S. Hemingway, A. Felton & G. Stacey, eds. *Fundamentals of mental health nursing: an essential guide for nursing and healthcare students*. Oxford: John Wiley & Sons, pp. 3-20.

Fernandes, R. L. & Miranda, F. A. N., 2016. Analysis of the Theory of Interpersonal Relationships: nursing care in psychosocial care centers. *Journal of Nursing UFPE Online*, 10(2), pp. 880–886.

Ferreira, S., Magalhães, E. & Prioste, A., 2020. Social support and mental health of young people in residential care: a qualitative study. *Anuario de Psicologia Juridica*, 30(1), pp. 29-34.

Fetters, M. D., Curry, L. A. & Creswell, J. W., 2013. Achieving integration in mixed methods designs-principles and practices. *Health Services Research*, 48(6 Pt 2), pp. 2134-2156.

Flouri, E. & Buchanan, A., 2003. The role of father involvement and mother involvement in adolescents' psychological well-being. *British Journal of Social Work*, 33(3), pp. 399-406.

Foret, M. M. et al., 2012. Integrating a relaxation response-based curriculum into a public high school in Massachusetts. *Journal of Adolescence*, 35(2), pp. 325-332.

Franzoi, M. A. H. et al., 2016. Peplau's Interpersonal Relations Theory: an evaluation based on Fawcett's criteria. *Journal of Nursing*, 10(4), pp. 3653–3661.

Freire, T. et al., 2018. Challenge: To Be +. A group intervention program to promote the positive development of adolescents. *Children and Youth Services Review*, 87, pp. 173-185.

Friedman, J., Hastie, T. & Tibshirani, R., 2019. *Glasso: Graphical Lasso: estimation of Gaussian graphical models.* [Online] Available at: https://cran.r-project.org/web/packages/glasso/index.html [Accessed 29. 12. 2020].

Fung, S., 2019. Psychometric evaluation of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) with Chinese university students. *Health and Quality of Life Outcomes*, 17(46), pp. 1-9.

Garcia, C., Pintor, J., Vazquez, G. & Alvarez-Zumarraga, E., 2013. Project Wings, a coping intervention for Latina adolescents: a pilot study. *Western Journal of Nursing Research,* 35(4), pp. 434-458.

García-Carrión, R., Villarejo-Carballido, B. & Villardón-Gallego, L., 2019. Children and adolescents mental health: a systematic review of interaction-based interventions in schools and communities. *Frontiers in Psychology*, 10(918), pp. 1-10.

Gastmans, C., 1998. Interpersonal relations in nursing: a philosophical–ethical analysis of the work of Hildegard E. Peplau. *Journal of Advanced Nursing*, 28(6), pp. 1312–1319.

Gazibara, T. et al., 2019. Menopause-specific Quality of Life Questionnaire: factor and Rasch analytic approach. *Climacteric*, 22(1), pp. 90-96.

Gigantesco, A. et al., 2015. A universal mental health promotion programme for young people in Italy. *BioMed Research International*, 2015(345926), pp. 1-9.

Glaser, B. G. & Strauss, A. L., 1967. *The discovery of grounded theory: strategies for qualitative research.* London: Weidenfeld and Nicolson.

Goforth, C., 2015. *Using and interpreting Cronbach's Alpha.* [Online] Available at: https://data.library.virginia.edu/using-and-interpreting-cronbachs-alpha/ [Accessed 15. 5. 2018].

Gold, C., Saarikallio, S., Crooke, A. H. D. & McFerran, K. S., 2017. Group music therapy as a preventive intervention for young people at risk: cluster-randomized trial. *Journal of Music Therapy*, 54(2), pp. 133-160.

Goldkuhl, G. & Cronholm, S., 2010. Adding theoretical grounding to grounded theory: toward multi-grounded theory. *International Journal of Qualitative Methods*, 9(2), pp. 187-205.

Graham, A., Phelps, R., Maddison, C. & Fitzgerald, R., 2011. Supporting children's mental health in schools: teacher views. *Teachers and Teaching*, 17(4), pp. 479–496.

Granrud, M. D., Anderzèn-Carlsson, A., Bisholt, B. & Steffenak, A. K. M., 2019. Public health nurses' perceptions of interprofessional collaboration related to adolescents' mental health problems in secondary schools: a phenomenographic study. *Journal of Clinical Nursing*, 28(15-16), pp. 2899-2910.

Gray, J. R. & Grove, S. K., 2021. *The practice of nursing research: appraisal, synthesis, and generation of evidence*. 9th ed. St. Louis: Elsevier.

Green, H. M., 2012. *Exploring teachers' constructs of mental health and their reported responses to young people experiencing mental health problems: a grounded theory approach: doctoral dissertation*. London: University of East London.

Guba, E. & Lincoln, Y., 1989. *Fourth generation evaluation*. Thousand Oaks (CA): Sage Publications.

Guetterman, T. C., Babchuk, W. A., Howell Smith, M. C. & Stevens, J., 2019. Contemporary approaches to mixed methods–grounded theory research: a field-based analysis. *Journal of Mixed Methods Research*, 13(2), pp. 179–195.

Guidelines for the implementation of preventive healthcare at the primary level. Official Gazette of the RS, no. 23/05.

Haddad, M., Butler, G. S. & Tylee, A., 2010. School nurses' involvement, attitudes and training needs for mental health work: a UK-wide cross-sectional study. *Journal of Advanced Nursing*, 66(11), pp. 2471-2480.

Hagerty, T. A., 2015. *Testing Peplau's Theory of Interpersonal Relations in nursing using data from patient experience surveys: PhD dissertation*. New York: City University of New York.

Haraldsson, K. S. et al., 2008. Evaluation of a school-based health promotion programme for adolescents aged 12–15 years with focus on well-being related to stress. *Public Health*, 122(1), pp. 25-33.

Hardin, H. K., Bender, A. E., Hermann, C. P. & Speck, B. J., 2020. An integrative review of adolescent trust in the healthcare provider relationship. *Journal of Advanced Nursing*, 77(4), pp. 1645-1655.

Harris, J. & Porcellato, L., 2018. Opt-out parental consent in online surveys: ethical considerations. *Journal of Empirical Research on Human Research Ethics*, 13(3), pp. 223–229.

Haver, A. et al., 2015. Measuring mental well-being: s validation of the short Warwick–Edinburgh Mental Well-Being Scale in Norwegian and Swedish. *Scandinavian Journal of Public Health*, 43, pp. 721–727.

Health Behaviour in School-aged Children Network, 2014. *Health behaviour in school-aged children (HBSC): terms of reference*. St Andrews: University of St. Andrews. [pdf] Available at: http://www. hbsc.org/about/ HBSC%20ToR.pdf [Accessed 17. 9. 2019].

Health Behaviour in School-aged Children Network, 2019. *Slovenia*. [Online] Available at: http://www.hbsc.org/membership/ countries /slovenia.html [Accessed 17. 9. 2019].

Health Services Act. Official Gazette of the RS, 23/05 – official consolidated text, 15/08 – ZPacP, 23/08, 58/08 – ZZdrS-E, 77/08 – ZDZdr, 40/12 – ZUJF, 14/13, 88/16 – ZdZPZD, 64/17, 1/19 – odl. US, 73/19, 82/20, 152/20 – ZZUOOP, 203/20 – ZIUPOPDVE in 112/21 – ZNUPZ.

Healthcare and Health Insurance Act. Official Gazette of the RS, no. 9/92.

Heary, C., Hennessy, E., Swords, L. & Corrigan, P., 2017. Stigma towards mental health problems during childhood and adolescence: theory, research and intervention approaches. *Journal of Child and Family Studies*, 26(11), pp. 2949-2959.

Hemker, B. T., Sijtsma, K. & Molenaar, I. W., 1995. Selection of unidimensional scales from a multidimensional item bank in the polytomous Mokken IRT model. *Applied Psychological Measurement*, 19(4), pp. 337–352.

Ho, F.K.W. et al., 2017. A sports-based youth development program, teen mental health, and physical fitness: an RCT. *Paediatrics*, 140(4), pp 1-10.

Hoffman, S., Rueda, H. A. & Lambert, M. C., 2019. Confirmatory factor analysis of the Warwick-Edinburgh Mental Well-being Scale among youth in Mexico*. International Social Work*, 62(1), pp. 309-315.

Horn, J. L., 1965. A rationale and test for the number of factors in factor analysis. *Psychometrika*, 30(2), pp. 179–185.

Houlahan, B., 2018. Origins of school nursing. *The Journal of School Nursing*, 34(3), pp. 203-210.

Hoyer, S., 2005. *Pristopi in metode v zdravstveni vzgoji.* Ljubljana: Visoka šola za zdravstvo.

Howell Smith, M. C. et al., 2020. Modeling the use of mixed methods–grounded theory: developing scales for a new measurement model. *Journal of Mixed Methods Research*, 14(2), pp. 184-206.

Huang, R., 2014. *RQDA: R-based qualitative data analysis R package version 0.2-7* [Online]. Available at: http://rqda.r-forge.r-project.org [Accessed 16. 4. 2020].

Huen, J. M. et al., 2016. Evaluation of a digital game-based learning program for enhancing youth mental health: a structural equation modeling of the program effectiveness. *JMIR Mental Health*, 3(4), p. e46.

Hughton, S. et al., 2017. Positive mental Well-Being: a validation of a Rasch-derived version of the Warwick-Edinburgh Mental Well-Being Scale. *Assessment*, 24(3), pp. 371-386.

Hvala, N. et al., 2012. Mladostnik in samopoškodba: možnosti in priložnosti za izvajanje preventivnega zdravstvenovzgojnega dela. *Obzornik Zdravstvene Nege*, 46(4), pp. 289-296.

Ikink, J. G. M., 2012. *De Warwick-Edinburgh Mental Well-being Scale (WEMWBS) als meetinstrument voor mentaal welbevinden in Nederland: master thesis*. Enschede: Universiteit Twente.

Isnis Isa, M., 2013. *Singapore mental wellbeing scales for children & youth*. [pdf] Available at: https://www.imh.com.sg/uploadedFiles/Clinical_Services/Community-based_Services/REACH/Isnis-Singapore-Mental-Wellbeing-Scale.pdf [Accessed 24. 5. 2018].

Israel, B. & Schurman, S., 1990. Social support, control, and the stress process. In: K. Glanz, M. Frances & B. Rimer, eds. *Health behaviour and health education: theory, research, and practice*. San Francisco: Jossey-Bass, pp. 187 -215.

Janca, A., 1998. Images in psychiatry. World Health Organization. Division of mental health and prevention of substance abuse. *The American Journal of Psychiatry*, 155(2), p. 277.

Jeriček Klanšček, H. et al., 2011. *Neenakosti v zdravju in z zdravjem povezanih vedenjih Slovenskih mladostnikov.* Ljubljana: IVZ. [pdf] Available at: http://www.infomosa.si/doc/ HBSC_2010.pdf [Accessed 17. 9. 2019].

Jeriček Klanšček, H. et al., 2015*. Z zdravjem povezana vedenja v šolskem obdobju med mladostniki v Sloveniji, izsledki mednarodne raziskave HBSC, 2014*. Ljubljana: Nacionalni inštitut za javno zdravje. [Online] Available at: http://www.nijz.si/publikacije/z-zdravjem-povezano-vedenje-v-solskem-obdobju-med-mladostniki-v-sloveniji-hbsc-2014 [Accessed 17. 9. 2019].

Jeriček Klanšček, H. et al., 2018. *Duševno zdravje otrok in mladostnikov v Sloveniji.* Ljubljana: Nacionalni inštitut za javno zdravje.

Johnson, C., Burke, C., Brinkman, S. & Wade, T., 2016. Effectiveness of a school-based mindfulness program for transdiagnostic prevention in young adolescents. *Behaviour Research and Therapy*, 81, pp. 1-11.

Johnson, C., Eva, A. L., Johnson, L. & Walker, B., 2010a. Don't turn away: empowering teachers to support students' mental health. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 84(1), pp. 9–14.

Johnson, J., Irizarry, M., Nguyen, N. & Maloney, P., 2018. *Part 1: foundational theories of human motivation*. Orlando: University of Central Florida.

Johnson, R., McGowan, M. & Turner, L., 2010b. Grounded theory in practice: is it inherently a mixed method? *Research in the Schools*, 17(2), pp. 65-78.

Kaiser, H., 1974. An index of factor simplicity. *Psychometrika*, 39(1), pp. 31–36

Kallio, H., Pietilä, A. M., Johnson, M. & Kangasniemi, M., 2016. Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(12), pp. 2954-2965.

Kang, Y. et al., 2018. Gender differences in response to a school-based mindfulness training intervention for early adolescents. *Journal of School Psychology,* 68, pp.163-176.

Karaer, Y. & Akdemir, D., 2019. Parenting styles, perceived social support and emotion regulation in adolescents with internet addiction. *Comprehensive Psychiatry*, 92, pp. 22-27.

Karcher, M. J., 2019. *Hemingway measure of adolescent connectedness.* [Online] Available at: http://adolescentconnectedness.com/index.php [Accessed 7. 10. 2019].

Karcher, M. J. & Finn, L., 2005. How connectedness contributes to experimental smoking among rural youth: developmental and ecological analyses. *The Journal of Primary Prevention*, 26(1), pp. 25-36.

Kärnä, A. et al., 2011. A large-scale evaluation of the KiVa antibullying program: grades 4–6. *Child Development*, 82(1), pp. 311–330.

Kidger, J. et al., 2016. A pilot cluster randomised controlled trial of a support and training intervention to improve the mental health of secondary school teachers and students – the WISE (Wellbeing in Secondary Education) study. *BMC Public Health*, 16(1), p. 1060.

Kim, S. et al., 2014. A validation study of the Korean version of Warwick-Edinburgh Mental Well-Being Scale. *Journal of Korean Neuropsychiatric Association*, 53(4), pp. 237-245.

Kimber, B., Sandell, R. & Bremberg, S., 2008. Social and emotional training in Swedish classrooms for the promotion of mental health: results from an effectiveness study in Sweden. *Health Promotion International,* 23(2), pp. 134-143.

Kirkman, T. W., 1996. *Statistics to use: Kolmogorov-Smirnov test*. [Online] Available at: http://www.physics.csbsju.edu/stats/KS-test.html [Accessed 28. 1. 2020].

Klemenčič, S. & Hlebec, V., 2007. *Fokusne skupine kot metoda presojanja in razvijanja kakovosti izobraževanja.* Ljubljana: Andragoški center Slovenije.

Klineberg, E. et al., 2006. Social support, ethnicity and mental health in adolescents. *Social Psychiatry and Psychiatric Epidemiology*, 41(9), pp. 755-760.

Kozel, D., 2007. Depresivne motnje. In: B. Štern, ed. *Zgodnje odkrivanje in celostna obravnava otrok in mladostnikov, ki jih ogrožajo kronične nenalezljive bolezni, v osnovni zdravstveni dejavnosti: izhodišča za obravnavo osnovnih zdravstvenih tem: zbornik projekta*. Ljubljana: CINDI Slovenija, pp. 38-41.

Kratt, D., 2018. Teachers' perspectives on educator mental health competencies: a qualitative case study. *American Journal of Qualitative Research*, 2(1), pp. 22-40.

Krueger, R. A. & Casey, M. A., 2014. *Focus groups: a practical guide for applied research*. 5th ed. Thousand Oaks (CA): Sage Publications.

Kuyken, W. et al., 2013. Effectiveness of the mindfulness in schools programme: non-randomised controlled feasibility study. *British Journal of Psychiatry*, 203(2), pp. 126-131.

Lang, G. & Bachinger, A., 2017. Validation of the German Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) in a community-based sample of adults in Austria: a bi-factor modelling approach. *Journal of Public Health*, 25(2), pp. 135-346.

Latha, K. S. & Reddy, H., 2007. Patterns of stress, coping styles and social supports among adolescents. *Journal of Indian Association for Child and Adolescent Mental Health*, 3(1), pp. 5-9.

Leighton, S., 2009. Adolescents' understanding of mental health problems: conceptual confusion. *Journal of Public Mental Health*, 8(2), pp. 4-14.

Lendrum, A., Humphrey, N. & Wigelsworth, M., 2013. Social and emotional aspects of learning (SEAL) for secondary schools: implementation difficulties and their implications for school-based mental health promotion. *Child and Adolescent Mental Health*, 18(3), pp. 158-164.

Li, H., Ji, Y. & Chen, T., 2014. The roles of different sources of social support on emotional well-being among Chinese elderly. *PLoS One*, 9(3), p. e90051.

Lindell, M. K. & Brandt, C. J., 1999. Assessing interrater agreement on the job relevance of a test: a comparison of the CVI, T, rWG(J), and r*WG(J) indexes. *Journal of Applied Psychology,* 84(4), pp. 640-647.

Linton, M-J., Dieppe, P. & Medina-Lara, A., 2016. Review of 99 self-report measures for assessing well-being in adults: exploring dimensions of well-being and developments over time. *BMJ Open*, 6(7), p. e010641.

Lloyd, K. & Devine, P., 2012. Psychometric properties of the Warwick–Edinburgh Mental Well-being Scale (WEMWBS) in Northern Ireland. *Journal of Mental Health,* 21(3), pp. 257–263.

Lopez, M. A. et al., 2013. Adaptation into Spanish of the Warwick–Edinburgh Mental Well-being Scale (WEMWBS) and preliminary validation in a student sample. *Quality of Life Research*, 22(5), pp. 1099–1104.

Loureiro, C. et al., 2016. The +Contigo project in the voice of eight-grade students. In: *The European Proceedings of Social & Behavioural Sciences. icH&Hpsy 2016: 2nd International Conference on Health and Health Psychology, 6th to 9th July 2016, Porto.* London: Future Academy, pp. 158-170.

Ludwinek, A., Sandor, E. & Clevers, F., 2019. *Inequalities in the access of young people to information and support services*. Luxembourg: Publications Office of the European Union.

Lynn, M. R., 1986. Determination and quantification of content validity. *Nursing Research*, 35(6), pp. 382-385.

MacKean, G., 2011. *Mental health and well-being in postsecondary education settings: a literature and environmental scan to support planning and action in Canada.* Canadian association of college and university student services. [pdf] Available at: http://www.cacuss.ca/ Library/documents/Post Sec Final Report June6.pdf [Accessed 17. 9. 2019].

Mackenzie, K. & Williams, C., 2018. Universal, school-based interventions to promote mental and emotional wellbeing: what is being done in the UK and does it work? A systematic review. *BMJ Open*, 8(9), p. e022560.

Mair, P. & Hatzinger, R., 2007. Extended Rasch modeling: the eRm package for the application of IRT models in R. *Journal of Statistical Software*, 20(9), pp. 1–20.

Mariu, K. R., Merry, S. N., Robinson, E. M. & Watson, P. D., 2012. Seeking professional help for mental health problems, among New Zealand secondary school students. *Clinical Child Psychology and Psychiatry*, 17(2), pp. 284-297.

Martin, K. E. & Wood, L. J., 2017. Drumming to a new beat: a group therapeutic drumming and talking intervention to improve mental health and behaviour of disadvantaged adolescent boys. *Children Australia*, 42(4), pp. 268-276.

Martuza, V. R., 1977. *Applying norm-referenced and criterion-referenced measurement in education*. Boston: Allyn & Bacon.

McAllister, M. 2019. Nurses need to step up to improve child and adolescent mental health globally. *Contemporary Nurse*, 55(4-5), pp. 275-277.

McArdle, P. et al., 2011. Early intervention for at risk children: 3-year follow-up. *European Child & Adolescent Psychiatry*, 20(3), pp. 111-120.

McCarthy, C. T. & Aquino-Russell, C., 2009. A comparison of two nursing theories in practice. *Nursing Science Quarterly*, 20(1), pp. 34-40.

McGorry, P. D., Purcell, R., Hickie, I. B. & Jorm, A. F., 2007. Investing in youth mental health is a best buy. *The Medical Journal of Australia*, 187(7), p. S5.

McKenna, H., Murphy, F. & Pajnkihar, M., 2018. *Temelji modelov, teorij in prakse Zdravstvene nege*. Maribor: Univerzitetna založba Univerze v Mariboru.

McLeod, S. A., 2018. *Maslow's hierarchy of needs*. [Online] Available at: https://www.simplypsychology.org/maslow.html [Accessed 7. 10. 2019].

McMahon, E. M. et al., 2017. Physical activity in European adolescents and associations with anxiety, depression and well-being. *European Child & Adolescent Psychiatry,* 26(1), pp. 111-122.

Mental Health Act. Official Gazette of the RS, no. 77/08, 46/15.

Merriam-Webster Dictionary, n.d. *Adolescence.* [Online] Available at: https://www.merriam-webster.com/dictionary/adolescence [Accessed 23. 9. 2019].

Mfidi, F. H., Thupayagale-Tshweneagae, G. & Akpor, O. A., 2018. The TEAM model for mental health promotion among school-going adolescents. *Journal of Child & Adolescent Mental Health*, 30(2), pp. 99-110.

Miall, L., Rudolf, M. & Smith, D., 2016. *Paediatrics at a glance.* 4th ed. Oxford: John Wiley & Sons.

MIND, 2011. *Definition on mental health.* [Online] Available at: http://www.mind.org.uk/information-support/tips-for-everyday-living/well-being/#.WMzrMYXXJuk [Accessed 8. 8. 2019].

Ministry of Education, Science and Sport of the Republic of Slovenia, 2018. *Direktorat za srednje in višje šolstvo ter izobraževanje odraslih.* [Online] Available at: http://www.mizs.gov.si/si/delovna_podrocja/direktorat_za_srednje_in_visje_solstvo_ter_izobrazevanje_odraslih/ [Accessed 25. 7. 2018].

Ministry of Health of the Republic of Slovenia, 2010. *Pravilnik o organizaciji neprekinjenega zdravstvenega varstva*. Ljubljana: Ministrstvo za zdravje Republike Slovenije.

Ministry of Health of the Republic of Slovenia, 2016. *Analiza zdravstvenega sistema v Sloveniji: povzetek in ključne ugotovitve.* Ljubljana: Ministrstvo za zdravje Republike Slovenije.

Ministry of Health of the Republic of Slovenia, 2017*. Resolucija o nacionalnem programu duševnega zdravja 2018 – 2028*. [Online] Available at: https://e-uprava. gov.si/.download/edemokracija/datotekaVsebina/323441?disposition=inline [Accessed 25. 8. 2018].

Moher, D. et al., 2009. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Medicine*, 6(7), p. e1000097.

Molina, G. T. et al., 2014. Psychometric properties of the quality of life questionnaire health related KIDSCREEN-27 in Chilean adolescents. *Revista Medica de Chile*, 142(11), pp. 1415–1421.

Moore, G. F. et al., 2018. School, peer and family relationships and adolescent substance use, subjective well-being and mental health symptoms in Wales: a cross sectional study. *Child Indicators Research*, 11(6), pp. 1951-1965.

Morgan, R. L. et al., 2016. GRADE: Assessing the quality of evidence in environmental and occupational health. *Environmental International*, 92-93, pp. 611-616.

National Institute of Public Health, 2016. *Slovenian health system navigation guide for migrants*. Ljubljana: National Institute of Public Health.

National Institute of Public Health, 2020. *Skrbimo za duševno zdravje*. [Online] Available at: https://www.nijz.si/sl/skrbimo-za-dusevno-zdravje [Accessed 23. 9. 2020].

Newman, I. & Ramlo, S., 2010. Using Q methodology and Q factor analysis in mixes methods research. In: A. Tashakkori & C. Teddlie, eds. *Handbook of mixed methods in social & behaviour research*. 2nd ed. Thousand Oaks (CA): Sage.

Nezu, S. et al., 2016. Reliability and validity of Japanese versions of KIDSCREEN-27 and KIDSCREEN-10 questionnaires. *Environmental Health and Preventive Medicine*, 21(3), pp. 154-163.

Ng, J. Y. Y., Burnett, A., Ha, A. S. & Sum, K. W., 2015. Psychometric properties of the Chinese (Cantonese) versions of the KIDSCREEN health-related quality of life questionnaire. *Quality of Life Research*, 24(10), pp. 2415-2421.

Noret, N., Hunter, S. C. & Rasmussen, S., 2020. The role of perceived social support in the relationship between being bullied and mental health difficulties in adolescents. *School Mental Health*, 12(1), pp. 156-168.

Nurses and Midwives Association of Slovenia, 2014. *Pobuda za uvedbo šolske medicinske sestre v vzgojno varstvene in izobraževalne institucije v Sloveniji.* [Online] Available at: http://zbornica-zveza.si/sl/pobuda-zbornice-zveze-za-uvedbo-solske-medicinske-sestre [Accessed 20. 9. 2018].

Nystrom, M., 2007. A patient–oriented perspective in existential issues: a theoretical argument for applying Peplau's interpersonal relation model in healthcare science and practice. *Scandinavian Journal of Caring Science*, 21(2), pp. 282–288.

O'Connor, C. A., Dyson, J., Cowdell, F. & Watson, R., 2017. Do universal school-based mental health promotion programmes improve the mental health and emotional well-being of young people? A literature review. *Journal of Clinical Nursing*, 27(3-4) pp. e412-e426.

O'Dea, B. et al., 2020. A randomised controlled trial of a relationship-focussed mobile phone application for improving adolescents' mental health. *Journal of Child Psychology and Psychiatry,* 61(8), pp. 899-913.

O'Reilly, M. et al., 2018a. Is social media bad for mental health and wellbeing? Exploring the perspectives of adolescents. *Clinical child psychology and psychiatry*, 23(4), pp. 601-613.

O'Reilly, M., Svirydzenka, N., Adams, S. & Dogra, N., 2018b. Review of mental health promotion interventions in schools. *Social Psychiatry & Psychiatric Epidemiology*, 53(7), pp. 647-662.

Organisation for Economic Co-operation and Development, 2017. *Slovenija: zdravstveni profil leta 2017*. Paris: OECD Publishing.

Oermann, M. H. et al., 2018. Quality of articles published in predatory nursing journals. *Nursing Outlook*, 66(1), pp. 4-10.

Ooms, T. & Preister, S. eds., 1988. *A strategy for strengthening families: using family criteria in policymaking and program evaluation. a consensus report of the family criteria task force*. Washington (DC): Family Impact Seminar.

Pajnkihar, M., 2003. *Theory development for nursing in Slovenia: Ph.D. thesis.* Manchester: The Faculty of Medicine, Dentistry, Nursing and Pharmacy, University of Manchester.

Parahoo, K., 2006. *Nursing research: principles, process and issues*. 2nd ed. Basingstoke: Palgrave Macmillan.

Pardo-Guijarro, M. J. et al., 2013.Validity and reliability of the Spanish sign language version of the KIDSCREEN-27 health-related quality of life questionnaire for use in deaf children and adolescents. *Gaceta Sanitaria,* 27(4), pp. 318-324.

Parizi, A. S. et al., 2014. Psychometric properties of KIDSCREEN health-related quality of life questionnaire in Iranian adolescents. *Quality of Life Research*, 23(7), pp. 2133-2138.

Parse, R. R., 1992. Human becoming: Parse's theory of nursing. *Nursing Science Quarterly*, 5(1), pp. 35-42.

Patton, G. C. et al., 2006. Promoting social inclusion in schools: a group-randomized trial of effects on student health risk behaviour and well-being. *American Journal of Public Health*, 96(9), pp. 1582-1587.

Peirce, C., 1905. Review of Nichols' a treatise on cosmology. In: H. S. Thayer, ed. *Meaning and action: a critical history of pragmatism*. Indianapolis: Hackett.

Peplau, H. E., 1952. *Interpersonal relations in nursing: a conceptual frame of reference for psychodynamic nursing*. New York: Putnam.

Peplau, H. E., 1991. *Interpersonal relations in nursing: a conceptual frame of reference for psychodynamic nursing*. Reprint. New York: Springer Publishing Company.

Personal Data Protection Act. Official Gazette of the RS, no. 86/04.

Peterson, S. J., 2013. Interpersonal relations. In: Sandra J. Peterson & Timothy S. Bredow, eds. *Middle range theories: application to nursing research.* 3rd ed. London: Lippincott Williams & Wilkins, pp. 138–159.

Pietsch, A-S. & Lessmann, S., 2018. Topic modeling for analyzing open-ended survey responses. *Journal of Business Analytics*, 1(2), pp.93-116.

Polit, D. F. & Beck, C. T., 2004. *Nursing research: principles and methods.* 7th ed. Philadelphia: Lippincott, Williams, & Wilkins.

Polit, D. F. & Beck, C. T., 2006. The content validity index: are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health*, 29(5), pp. 489-497.

Polit, D. F. & Beck, C. T., 2017. *Nursing research: generating and assessing evidence for nursing practice.* 10th ed. Philadelphia: Walters Kluwer.

Polit, D. F., Beck, C. T. & Owen, S. V., 2007. Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in Nursing & Health*, 30(4), pp. 459–467.

Popovič, R., 2013. *Health services payment system in Slovenia*. [pdf] Available at: http://www.vm.gov.lv/images/userfiles/rpopovic_slovenia.pdf [Accessed 19. 10. 2019].

Pössel, P. et al., 2018. Associations between social support from family, friends, and teachers and depressive symptoms in adolescents. *Journal of Youth and Adolescence*, 47(2), pp. 398-412.

Poudel, A., Gurung, B. & Khanal, G. P., 2020. Perceived social support and psychological wellbeing among Nepalese adolescents: the mediating role of self-esteem. *BMC Psychology*, 8(1), p. 43.

Poulakka, K., Konu, A., Kiikkala, I. & Paavilainen, E., 2014. Mental health promotion in school: schoolchildren's and families' viewpoint. *Nursing Research and Practice*, 2014(395286), pp. 1-10.

Power, R. et al., 2019. Cross-cultural validation of the Bengali version KIDSCREEN-27 quality of life questionnaire. *BMC Paediatrics*, 19(19), pp. 1-10.

Pucelj, V. et al., 2016. *Skupaj za zdravje - za boljše zdravje in zmanjševanje neenakosti v zdravju otrok in mladostnikov: program vzgoje za zdravje za otroke in mladostnike (0 do 19 let).* Ljubljana: National Institute of Public Health.

Puskar, K. R. & Bernardo, L. M., 2007. Mental health and academic achievement: role of school nurses. *Journal for Specialists in Pediatric Nursing*, 12(4), pp. 215-223.

Qualtrics, 2018. *Calculating sample size.* [Online] Available at: https://www. qualtrics. com /blog/calculating-sample-size/ [Accessed 13. 9. 2018].

Quintero, C. A., Lugo, L. H., García, H. I. & Sánchez, A., 2011. Validation of questionnaire KIDSCREEN-27 to measure health related quality of life in children and adolescents of Medellin, Colombia. *Revista Colombiana de Psiquiatría,* 40(3), pp. 470-487.

R Development Core Team, 2005. *A language and environment for statistical computing*. Vienna: R Foundation for Statistical Computing.

Radez, J. et al., 2020. Why do children and adolescents (not) seek and access professional help for their mental health problems? A systematic review of quantitative and qualitative studies. *European Child & Adolescent Psychiatry*, 30(2), pp. 183-211.

Ravenna, J. & Cleaver, K., 2016. School nurses' experiences of managing young people with mental health problems: a scoping review. *The Journal of School Nursing*, 32(1), pp. 58-70.

Ravens-Sieberer, U., 2009. *Mental health and well-being in children and young people in the EU*. Stockholm: University Medical Center Hamburg Eppendorf.

Ravens-Sieberer, U. et al., 2005. KIDSCREEN-52 quality-of-life measure for children and adolescents. *Expert Review of Pharmacoeconomics & Outcomes Research*, 5(3), pp. 353-364.

Ravens-Sieberer, U. et al., 2007. The KIDSCREEN-27 quality of life measure for children and adolescents: psychometric results from a cross-cultural survey in 13 European Countries. *Quality of Life Research*, 16(8), pp. 1347–1356.

Ravens-Sieberer, U. et al., 2010. Reliability, construct and criterion validity of the KIDSCREEN-10 score: a short measure for children and adolescents' well-being and health-related quality of life. *Quality of Life Research*, 19(10), pp. 1487-1500.

Ravens-Sieberer, U. et al., 2014. The European KIDSCREEN approach to measure quality of life and well-being in children: development, current application, and future advances. *Quality of Life Research*, 23(3), pp. 791-803.

Rees-Evans, D. & Pevalin, D. J., 2017. Using the principle based model to improve well-being in school: a mixed-methods pilot study. *Sage Open*, 7(2), pp. 1-9.

Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (GDPR). Official Journal of the EU, L 199/1, 04.05.2016.

Reinke, W. M. et al., 2011. Supporting children's mental health in schools: teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly*, 26(1), pp. 1-13.

Reupert, A. et al., 2019. An Online intervention to promote mental health and wellbeing for young adults whose parents have mental illness and/or substance use problems: theoretical basis and intervention description. *Frontiers in Psychiatry*, 10(59), pp. 1-8.

Revelle, W., 2017. *Psych: procedures for psychological, psychometric, and personality research*. [Online] Available at: https://CRAN.R-project.org/package=psych [Accessed 4. 8. 2021].

Revelle, W. & Rocklin, T., 1979. Very simple structure: an alternative procedure for estimating the optimal number of interpretable factors. *Multivariate Behavioral Research*, 14(4), pp. 403–414.

Ringdal, R. et al., 2018. Validation of two versions of the Warwick-Edinburgh Mental Well-Being Scale among Norwegian adolescents. *Scandinavian Journal of Public Health*, 46(7), pp. 718-725.

Ringdal, R. et al., 2021. Bullying, social support and adolescents' mental health: Results from a follow-up study. *Scandinavian Journal of Public Health,* 49(3), pp. 309-316.

Roberts, C. et al., 2009. The Health Behaviour in School-aged Children (HBSC) study: methodological developments and current tensions. *International Journal of Public Health,* 54(Suppl 2), pp. 140–150.

Robitail, S. et al., 2007. Testing the structural and cross-cultural validity of the KIDSCREEN-27 health-related quality of life questionnaire. *Quality of Life Research*, 16(8), pp. 1335–1345.

Ronen, T., Hamama, L., Rosenbaum, M. & Mishely-Yarlap, A., 2016. Subjective well-being in adolescence: the role of self-control, social support, age, gender, and familial crisis. *Journal of Happiness Studies*, 17(1), pp. 81-104.

Rose, K., Hawes, D. J. & Hunt, C. J., 2014. Randomized controlled trial of a friendship skills intervention on adolescent depressive symptoms. *Journal of Consulting and Clinical Psychology*, 82(3), pp. 510-520.

Rose, T. et al., 2017. Measuring mental wellbeing among adolescents: a systematic review of instruments. *Journal of Child and Family Studies*, 26(9), pp. 2349-2362.

Rosseel, Y., 2012. Lavaan: an R package for structural equation modeling. *Journal of Statistical Software*, 48(2), pp. 1–36.

Roth, R., Suldo, S. & Ferron, J., 2017. Improving middle school students' subjective well-being: efficacy of a multicomponent positive psychology intervention targeting small groups of youth. *School Psychology Review*, 46(1), pp. 21-41.

Rothon, C., Goodwin, L. & Stansfeld, S., 2012. Family social support, community ‘‘social capital’’ and adolescents’ mental health and educational outcomes: a longitudinal study in England. *Social Psychiatry and Psychiatric Epidemiology*, 47(5), pp. 697-709.

Royal College of Nursing, 2009. *Research ethics: RCN guidance for nurses*. London: The Royal College of Nursing.

Ruini, C. et al., 2009. School intervention for promoting psychological well-being in adolescence. *Journal of Behaviour Therapy and Experimental Psychiatry*, 40(4), pp. 522-532.

Salam, R. A., Das, J. K., Lassi, Z. S. & Bhutta, Z. A., 2016. Adolescent health and well-being: background and methodology for review of potential interventions. *Journal of Adolescent Health*, 59(4 Suppl), pp. S4-S10.

Salvador-Carulla, L., Lucas, R., Ayuso-Mateos, J. L. & Miret, M., 2014. Use of the terms “well-being” and “quality of life” in health sciences: a conceptual framework. *The European Journal of Psychiatry*, 28(1), pp. 50–65.

Santos, J. J. A. et al., 2015. Adaptation and cross-cultural validation of the Brazilian version of the Warwick-Edinburgh mental well-being scale. *Revista da Associação Médica Brasileira*, 61(3), pp. 209-214.

Sarriera, J. C. & Bedin, L. M., 2017. *Psychosocial well-being of children and adolescents in Latin America: evidence-based interventions*. Cham: Springer International Publishing.

Sawyer, S. M. et al., 2012. Adolescence: a foundation for future health. *The Lancet*, 379(9826), pp. 1630–1640.

Sclove, L. S., 1987. Application of model-selection criteria to some problems in multivariate analysis. *Psychometrika*, 52(3), pp. 333–343.

Searl, K. R. et al., 2014. Little people, big lessons: an innovative strategy to develop interpersonal skills in undergraduate nursing students. *Nurse Education Today*, 34(9), pp. 1201-1206.

Sellers, S. C., 1991. *A philosophical analysis of conceptual models of nursing: doctoral dissertation*. Iowa: Iowa State University.

Shannon, S. et al., 2017. Testing the psychometric properties of Kidscreen-27 with Irish children of low socio-economic status. *Quality of Life Research*, 26(4), pp. 1081-1089.

Shives, L. R., 2012. *Basic concepts of psychiatric-mental health nursing*. 8th ed. London: Lippincott Williams & Wilkins.

Shoshani, A. & Steinmetz, S., 2014. Positive psychology at school: a school-based intervention to promote adolescents' mental health and well-being. *Journal of Happiness Studies*, 15(6), pp. 1289-1311.

Singh, K. & Raina, M., 2020. Demographic correlates and validation of PERMA and WEMWBS scales in Indian adolescents. *Child Indicators Research,* 13(4), pp. 1175-1186.

Skundberg-Kletthagen, H. & Moen, Ø. L., 2017. Mental health work in school health services and school nurses' involvement and attitudes, in a Norwegian context. *Journal of Clinical Nursing*, 26(23-24), pp. 5044-5051.

Skuse, D., Bruce, H. & Dowdney, L., 2017. *Child psychology and psychiatry: frameworks for clinical training and practice.* 3rd ed. Singapore: John Wiley & Sons.

Smith, O. R. F. et al., 2017. Measuring mental well-being in Norway: validation of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). *BMC Psychiatry*, 17(182), pp. 1-9.

Smith, S., Schutte, L., Wissing, M. & Cromhout, A., 2018. *Validation of the short Warwick-Edinburgh Mental Well-being Scale in a South African adult group.* Vanderbijlpark: North-West University.

Smith, T. S. J. & Reid, L., 2018. Which "being" in wellbeing? Ontology, wellness and the geographies of happiness. *Progress in Human Geography*, 42(6), pp. 807-829.

Srivastava, K., 2011. Positive mental health and its relationship with resilience. *Indian Journal of Psychiatry*, 20(2), pp. 75-76.

Stafford, M. et al., 2016. Parent–child relationships and offspring's positive mental wellbeing from adolescence to early older age. *The journal of positive psychology*, 11(3), pp. 326-337.

Statistical Office of the Republic of Slovenia, 2017. *Statopis: statistični pregled Slovenije 2017*. [Online] Available at: https://www.stat.si/StatWeb/File/DocSysFile/ 9743 [Accessed 19. 9. 2018].

Statistical Office of the Republic of Slovenia, 2018. *SiStat*. [Online] Available at: http://pxweb.stat.si/pxweb/Database/Dem_soc/09_izobrazevanje/04_osnovnosol_izobraz/01_09527_zac_sol_leta/01_09527_zac_sol_leta.asp [Accessed 25. 7. 2018].

Steiger, J. H., 1990. Structural model evaluation and modification: an interval estimation approach. *Multivariate Behavioral Research*, 25(2), pp. 173–180.

Stekhoven, D. J., 2016. *Package 'missForest'*. [pdf] Available at: https://cran.r-project.org/web/packages/missForest/missForest.pdf [Accessed 2. 8. 2021].

Stern, P. N., 1980. Grounded theory methodology: its uses and processes. *Image*, 12(1), pp. 20-23.

Stevanovic, D. et al., 2013. Evaluating the Serbian version of the KIDSCREEN quality-of-life questionnaires: reliability, validity, and agreement between children's and parents' ratings. *Quality of Life Research*, 22(7), pp. 1729-1737.

Stevens, V., De Bourdeaudhuij, I. & Van Oost, P., 2000. Bullying in Flemish schools: an evaluation of anti-bullying intervention in primary and secondary schools. *British Journal of Educational Psychology,* 70(2), pp. 195-210.

Stewart, T. & Suldo, S., 2011. Relationships between social support sources and early adolescents' mental health: the moderating effect of student achievement level. *Psychology in the Schools*, 48(10), pp. 1016-1033.

Stewart-Brown, S. & Janmohamed, K., 2008. *Warwick-Edinburgh Mental Well-being Scale (WEMWBS): user guide version 1*. [pdf] Available at: http://www.mentalhealthpromotion.net/resources/user-guide.pdf [Accessed 1. 10. 2019].

Stewart-Brown, S. et al., 2009. Internal construct validity of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS): a Rasch analysis using data from the Scottish

health education population survey. *Health and Quality of Life Outcomes*, 7(15), pp. 1-8.

Strauss, A. L. & Corbin, J., 1998. *Basics of qualitative research: techniques and procedures for developing grounded theory*. 2nd ed. London: Sage.

Streubert, H. J. & Carpenter, D. R., 2011. *Qualitative research in nursing: advancing the humanistic imperative.* 5th ed. Philadelphia: Lippincott Williams & Wilkins.

Suldo, S. M., Savage, J. A. & Mercer, S. H., 2014. Increasing middle school students' life satisfaction: efficacy of a positive psychology group intervention. *Journal of Happiness Studies*, 15(1), pp. 19-42.

Svab, V. & Zaletel-Kragelj, L., 2000. Mental healthcare. In: G. Burazeri & L. Zaletel Kragelj, eds. *Health: systems - lifestyle - policies: a handbook for teachers, researchers and health professionals*. Lage: Jacobs Publishing Company, pp. 63-81.

Taggart, F. et al., 2013. Cross cultural evaluation of the Warwick-Edinburgh mental well-being scale (WEMWBS) –a mixed methods study. *Health and Quality of Life Outcomes*, 11(27), pp. 1-12.

Taggart, F., Stewart-Brown, S. & Parkinson, J., 2015. *Warwick-Edinburgh Mental Well-being Scale (WEMWBS): user guide – version 2*. Edinburgh: NHS Health Scotland.

Tashakkori, A. & Creswell, J., 2007. The new era of mixed methods. *Journal of Mixed Methods Research,* 1(1), pp. 3-7.

Teixeira, L. A., Freitas, R. J. M. D., Moura, N. A. D. & Monteiro, A. R. M., 2020. Mental health needs of adolescents and the nursing cares: integrative review. *Texto & Contexto-Enfermagem*, 29, p. e20180424.

Tennant, R. et al., 2007. The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes*, 5(63), 1-13.

Tian, L., Liu, B., Huang, S. & Huebner, E. S., 2013. Perceived social support and school well-being among Chinese early and middle adolescents: the mediational role of self-esteem. *Social Indicators Research*, 113(3), pp. 991-1008.

Tian, L., Tian, Q. & Huebner, E. S., 2016. School-related social support and adolescents' school-related subjective well-being: the mediating role of basic psychological needs satisfaction at school. *Social Indicators Research*, 128(1), pp. 105-129.

The Government Office for Science, 2008. *Mental capital and well-being: making the most of ourselves in the 21st century*. London: The Government Office for Science.

Theocharidou, O. et al., 2018. The positive effects of a combined program of creative dance and braindance on health-related quality of life as perceived by primary school students. *Physical Culture and Sport Studies and Research*, 79(1), pp. 42-52.

Tomba, E. et al., 2010. Differential effects of well-being promoting and anxiety-management strategies in a non-clinical school setting. *Journal of Anxiety Disorders,* 24(3), pp. 326-333.

Tomyn, J. D., Fuller-Tyszkiewicz, M., Richardson, B. & Colla, L., 2016. A comprehensive evaluation of a universal school-based depression prevention program for adolescents. *Journal of Abnormal Child Psychology*, 44(8), pp. 1621-1633.

Torkar, T., Grmek Košnik, I. & Skela Savič, B., 2013. Vključevanje poklicnega profila šolska medicinska sestra v Slovenske šole: vidik učiteljev in zdravstvenih delavcev. *Obzornik Zdravstvene Nege*, 47(3), pp. 224-235.

Tracey, D. et al., 2018. Combining acceptance and commitment therapy with adventure therapy to promote psychological wellbeing for children at-risk. *Frontiers in Psychology*, 9, p. 1565.

Travelbee, J., 1977. *Interpersonal aspects of nursing*. 2nd ed. Philadelphia: Davis.

Trousselard, M. et al., 2016. Validation of the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) in French psychiatric and general populations. *Psychiatry Research*, 245, pp. 282–290.

Tucker, L. R. & Lewis, C. A., 1973. Reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38(1), pp. 1–10.

Tymms, P. B. et al., 2016. Clustered randomised controlled trial of two education interventions designed to increase physical activity and well-being of secondary school students: the MOVE Project. *BMJ Open*, 6(1), p. e009318.

United Nations, 1969. *Principles and recommendations for the 1970 population censuses*. New York: United Nations.

United Nations General Assembly, 1989. *Convention on the rights of the child*, 20 November 1989, United Nations, Treaty Series, vol. 1577, p. 3. New York: United Nations.

US National Institute for Health, 2019. *What is mental health?* [Online] Available at: https://www.mentalhealth.gov/basics/what-is-mental-health [Accessed 7. 10. 2019].

van de Weijer-Bergsma, E. et al., 2012. The effectiveness of a school-based mindfulness training as a program to prevent stress in elementary school children. *Mindfulness*, 5(3), pp. 238-248.

Van der Ark, L. A., 2007. Mokken scale analysis in R. *Journal of Statistical Software*, 20(11), pp. 1–19.

Van Droogenbroeck, F., Spruyt, B. & Keppens, G., 2018. Gender differences in mental health problems among adolescents and the role of social support: results from the Belgian health interview surveys 2008 and 2013. *BMC Psychiatry*, 18(1), p. 6.

van Lier, L. E. et al., 2017. Home gardening and the health and well-being of adolescents. *Health Promotion Practice*, 18(1), pp. 34-43.

Vekas, E. J. & Wade, T. D., 2017. The impact of a universal intervention targeting perfectionism in children: an exploratory controlled trial. *British Journal of Clinical Psychology*, 56(4), pp. 458-473.

Velez, C. M., Lugo-Agudelo, L. H., Hernandez-Herrera, G. N. & Garcia-Garcia, H. I., 2016. Colombian Rasch validation of KIDSCREEN-27 quality of life questionnaire. *Health and Quality of Life Outcomes*, 14(67), pp. 1-10.

Velicer, W. F., 1976. Determining the number of components from the matrix of partial correlations. *Psychometrika*, 41(3), pp. 321–327.

Veltro, F. et al., 2015. Promoting the psychological well-being of Italian youth: a pilot study of a high school mental health program. *Health Promotion Practice*, 16(2), pp. 169-175.

Vliet, H. V. & Andrews, G., 2009. Internet-based course for the management of stress for junior high schools. *The Australian and New Zealand Journal of Psychiatry*, 43(4), pp. 305-309.

Vrkić, A., 2018. *Tjelesna aktivnost i kvaliteta života studentica završnih godina učiteljskog fakulteta.* Zagreb: Sveučilište u Zagrebu, Učiteljski fakultet, Odsjek za učiteljske studije.

Walsh, S. D. et al., 2020. Clusters of contemporary risk and their relationship to mental well-being among 15-year-old adolescents across 37 countries. *Journal of Adolescent Health*, 66(6 Suppl), pp. S40-S49.

Waltz, C. F., Strickland, O. L. & Lenz, E. R., 2005. *Measurement in nursing and health research.* 3rd ed. New York: Springer Publishing.

Wang, C., Marsico, K. F. & Do, K. A., 2020. Asian American parents' beliefs about helpful strategies for addressing adolescent mental health concerns at home and school. *School Mental Health*, 12(3), pp. 523–536.

Wang, Z., Kouvonen, A., Satka, M. & Julkunen, I., 2019. Parental social support and adolescent well-being: a cross-sectional study in China. *Child Indicators Research*, 12(1), pp. 299-317.

Waqas, A. et al., 2015. Measuring the well-being of healthcare professionals in the Punjab: a psychometric evaluation of the Warwick-Edinburgh Mental Well-being Scale in a Pakistani population. *PeerJ,* 3, p. e1264.

Weeks, C., Hill, V. & Owen, C., 2017. Changing thoughts, changing practice: examining the delivery of a group CBT-based intervention in a school setting. *Educational Psychology in Practice*, 33(1), pp. 1-15.

Werner-Seidler, A. et al., 2017. The relationship between social support networks and depression in the 2007 National Survey of Mental Health and Well-being. *Social Psychiatry and Psychiatric Epidemiology*, 52(12), pp. 1463-1473.

Wight, R. G., Botticello, A. L. & Aneshensel, C. S., 2006. Socioeconomic context, social support, and adolescent mental health: a multilevel investigation. *Journal of Youth and Adolescence*, 35(1), pp. 115–126.

Wille, N., Bettge, S. & Ravens-Sieberer, U., 2008. Risk and protective factors for children's and adolescents' mental health: results of the BELLA study. *European child & Adolescent Psychiatry*, 17(1), pp. 133-147.

Williamson, G. R., 2003. Misrepresenting random sampling? A systematic review of research papers in the Journal of Advanced Nursing. *Journal of Advanced Nursing*, 44(3), pp. 278-288.

Williams, P., Barclay, L. & Schmied, V., 2004. Defining social support in context: a necessary step in improving research, intervention, and practice. *Qualitative Health Research,* 14(7), pp. 942-960.

Wit, D. J., Karioja, K., Rye, B. J. & Shain, M., 2011. Perceptions of declining classmate and teacher support following the transition to high school: potential correlates of increasing student mental health difficulties. *Psychology in the Schools*, 48(6), pp. 556-572.

Wolfe, E., 2017. *Bullying and mental health in children: development and evaluation of the ThinkSMART program, and an exploration of the pathways from victimisation to mental health difficulties: doctoral thesis*. Brisbane: The University of Queensland.

World Health Organization, 1946. *Constitution of the World Health Organization*. New York: World Health Organization.

World Health Organization, 2000. *The World health report 2000: health systems: improving performance.* Geneva: World Health Organization.

World Health Organization, 2003. *Investing in mental health*. Geneva: Department of Mental Health and Substance Dependence, Noncommunicable Diseases and Mental Health, World Health Organization.

World Health Organization, 2013. *Comprehensive mental health action plan 2013–2020.* [pdf] Available at https://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R8-en.pdf [Accessed 12. 10. 2019].

World Health Organization, 2014a. *Adolescent health*. [Online] Available at: http:// www.who. int/topics/adolescent_health/en/ [Accessed 17. 9. 2019].

World Health Organization, 2014b. *Health for the world's adolescents: a second chance in the second decade*. [pdf] Available at: http://apps.who.int/iris/bitstream/ handle/ 10665/112750/WHO_FWC_MCA_14.05_eng.pdf [Accessed 17. 9. 2019].

World Health Organization, 2014c. *Adolescence: a period needing special attention.* [Online] Available at: http://apps.who.int/adolescent/second-decade/section2/page1/ recognizing-adolescence.html [Accessed 23. 9. 2019].

World Health Organization, 2016a. *Growing up unequal: gender and socioeconomic differences in young people's health and well-being.* [pdf] Available at: http:// www. euro.who.int/ data/assets/pdf_file/0003/303438/HSBC-No.7-Growing-up-unequal-Full-Report.pdf [Accessed 23. 9. 2019].

World Health Organization, 2016b. *Adolescents/ mental well-being.* [pdf] Available at: https://www.euro.who.int/ data/assets/pdf_file/0020/303482/HBSC-No.7_ factsheet_Well-being.pdf [Accessed 8. 9. 2021].

World Health Organization, 2018. *Adolescent mental health in the European Region.* [pdf] Available at: http://www.euro.who.int/ data/assets/pdf_file/0005/383891/ adolescent-mh-fs-eng.pdf [Accessed 12. 10. 2019].

World Medical Association, 2013. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. *JAMA*, 310(20), pp. 2191–2194.

Wozniak, A., 2015. *A grounded theory exploration of the experience of disclosing and not disclosing in mother-adolescent daughter relationships: doctoral dissertation*. Ontario: University of Guelph, Department of Family Relations and Applied Nutrition.

Wright, K. M. & McKeown, M. eds., 2018. *Essentials of mental health nursing*. London: SAGE Publications.

Wynd, C. A., Schmidt, B. & Schaefer, M. A., 2003. Two quantitative approaches for estimating content validity. *Western Journal of Nursing Research*, 25(5), pp. 508-518.

Zaiger, D. S., 2000. School nursing services: the early years. *The Journal of School Nursing*, 16(3), pp. 11-19.

Zheng, M., 2015. Conceptualization of cross-sectional mixed methods studies in health science: a methodological review. *International Journal of Quantitative and Qualitative Research Methods,* 3(2), pp. 66-87.

Žnidaršič, A., 2013. *Vodnik po SPSS-u: delovna verzija*. [Online] Available at: http://doczz.net/doc/6893519/vodnik-po-spss-u-delovna-verzija--2--anjaznidaršic [Accessed 6. 11. 2019].

Žukauskienė, R., 2014. Adolescence and well-being. In: A. Ben-Arieh, F. Casas, I. Frønes & J. E. Korbin, eds. *Handbook of child well-being: theories, methods and policies in global perspective*. Dordrecht: Springer Netherlands, pp. 1713-1737.

Appendixes

In the following text a table of appendixes is provided.

Table of Appendixes

APPENDIX A: QUESTIONNAIRE

Obrazec z dodatnimi informacijami

Naslov raziskave:	*Podpora zdravstvene nege pri spodbujanju duševnega blagostanja mladostnikov*		
Glavni raziskovalec:	Leona Cilar	**Kontaktna številka:**	+386 2 300 47 59

Vabljeni ste, da se udeležite raziskave o duševnem blagostanju mladostnikov. Odločitev ali boste sodelovali pri raziskavi je prepuščena izključno vam. Če ne želite sodelovati, vam ni treba podati razlog in to nikakor ne bo vplivalo na vas. V primeru, da se zdaj strinjate z sodelovanjem v raziskavi in kasneje želite odstopiti, lahko to naredite v katerikoli fazi raziskovanja.

Obrazec z dodatnimi informacijami vam bo pomagal pri odločitvi ali želite v raziskavi sodelovati. V njem je navedeno, zakaj izvajamo študijo, kakšno bo vaše sodelovanje in kaj se bo zgodilo po zaključku raziskovanja. Skozi te informacije bomo šli skupaj z vami in odgovorili na morebitna vprašanja. Danes vam ni treba odločiti, ali boste sodelovali v tej študiji ali ne. Preden se odločite, boste morda želeli govoriti z drugimi ljudmi, kot so družina, prijatelji ali zdravstveni delavci. To lahko storite.

Ta dokument je dolg 7 strani, vključno s obrazcem za privolitev. Prepričajte se, da ste prebrali in razumeli vse strani.

KAJ JE NAMEN RAZISKOVANJA?

Namen raziskovanja je ugotoviti podporo zdravstvene nege v povezavi z duševnim blagostanjem mladostnikov ter zaznavanje podpore duševnemu blagostanju mladostnikov s strani ožjega socialnega okolja. Prav tako želimo ugotoviti, kako lahko z vidika zdravstvene nege izboljšamo tovrstno podporo pri mladostnikih.

Cilji so:

- opredeliti duševno zdravje, duševno blagostanje in duševne motnje,
- opredeliti obdobje in značilnosti mladostništva,
- ugotoviti, kako mladostniki zaznavajo vlogo diplomirane medicinske sestre pri zagotavljanju duševnega blagostanja,
- ugotoviti ali je podpora s strani družine, prijateljev in učiteljev povezana z duševnim blagostanjem mladostnikov,
- ugotoviti, kako mladostniki, starši, učitelji, diplomirane medicinske sestre in zakonodajalci zaznavajo podporo duševnemu blagostanju mladostnikov,
- pridobljene rezultate primerjati z že ugotovljenimi,

- na podlagi pregleda, analize in sinteze literature oblikovati teorijo za podporo duševnemu blagostanju mladostnikov z vidika zdravstvene nege.

KAJ UDELEŽBA V RAZISKAVI VKLJUČUJE?

V raziskavo ste bili povabljeni, ker ste študent izobraževalne ustanove (šole), v kateri poteka raziskava.

Prosili vas bomo, da izpolnite vprašalnik, ki je sestavljen iz štirih delov: vprašalnika o zdravju mladostnikov, duševnem zdravju mladostnikov, zdravstveni negi in demografska vprašanja. Za vprašanja, kjer je možnih več odgovorov, je to ustrezno označeno. Če želite izbrati odgovor, označite (●) krog pred vsakim odgovorom. Za nekatera vprašanja iz prvega dela imate stopnjo strinjanja, ki sega od sploh ne do skrajno. Drugi del vprašalnika ponuja obseg soglašanja od nikoli do vedno.

Rezultati raziskave nam bodo dali boljši vpogled v zaznavanje podpore socialnega okolja o duševnem blagostanju mladostnikov.

Po zbiranju podatkov bomo dobili jasno povezavo med podporo družine, prijateljev, učiteljev in medicinskih sester ter duševnim blagostanjem mladostnikov. Rezultati raziskave se bodo uporabili izključno v raziskovalne namene.

KDO PLAČA IZVEDBO RAZISKAVE?

Udeleženci ne bodo deležni stroškov. Raziskava ni financirana s strani komercialnih partnerjev.

KAJ ČE KARKOLI GRE NAROBE?

V primeru kakršnih koli težav ali nevšečnosti v procesu raziskave lahko odstopite od raziskovanja, se pritožite ali pogovorite s koordinatorjem raziskave.

KAKŠNE SO MOJE PRAVICE?

Sodelovanje v študiji je prostovoljno in zaupno. Lahko odklonite sodelovanje v raziskavi, prav tako lahko po privolitvi v kateri koli fazi raziskovanja odstopite brez kakršnih koli neugodnosti. Imate tudi pravico do dostopa do informacij o vas, katere so bile zbrane v okviru študije. Podatki bodo shranjeni varno in zaupno. Vaša identiteta ne bo razvidna v kateri koli fazi zbiranja podatkov in analize.

KOGA LAHKO KONTAKTIRAM ZA VEČ INFORMACIJ ALI V PRIMERU SKRBI?

Če imate kakšna vprašanja, skrbi ali pritožbe glede raziskave, se obrnite na:

Ime, naziv: Leona Cilar, asistentka

Telefonska številka: +3862 300 47 59

E-mail: leona.cilar1@um.si

Obrazec o soglašanju

Prosimo, da nam poveste, če rabite nekoga, da vam informacije razloži.

Označite, da se strinjate z naslednjimi trditvami:

Prebral sem, oz so mi prebrali v mojem jeziku in razumem obrazec z dodatnimi informacijami.	Da ☐	Ne ☐
Dobil sem dovolj časa, da razmislim o sodelovanju v raziskavi.	Da ☐	Ne ☐
Dobil sem možnost, da sodeluje moj pravni zastopnik, družinski član ali prijatelj pri postavljanju vprašanj in razumevanju študije.	Da ☐	Ne ☐
Sem zadovoljen z odgovori, katere sem prijel o raziskavi.	Da ☐	Ne ☐
Razumem, da je sodelovanje v raziskavi prostovoljno (lastna izbira) in da kadar koli odstopim od sodelovanja v raziskavi.	Da ☐	Ne ☐
Soglašam z raziskovalnim osebjem, da zbira in obdeluje moje podatke, vključno z informacijami o zdravju.	Da ☐	Ne ☐
V primeru, da se odločim prekiniti sodelovanje v raziskovanju, se strinjam, da se lahko informacije, zbrane o meni, do točke, ko se umaknem, še naprej obdelujejo.	Da ☐	Ne ☐
Razumem, da je moja udeležba v raziskavi zaupna in da v nobenih poročilih ne bo uporabljen material, kjer bi bila moja identiteta razvidna-	Da ☐	Ne ☐
Vem komu se lahko obrnem, če bi želel vedet več o tej raziskavi.	Da ☐	Ne ☐
Razumem svoje dolžnosti kot udeleženec raziskave.	Da ☐	Ne ☐

V primeru, da nadaljujete z sodelovanjem predvidevamo, da dajete svoje soglasje.

a) Vprašalnik o zdravju mladostnikov

Spodaj je naštetih nekaj vprašanj. Prosimo, da Vaš odgovor izberete tako, da krogec pred odgovorom pobarvate (●).

1. Kako bi na splošno ocenili svoje zdravje?

○ Odlično.
○ Zelo dobro.
○ Dobro.
○ Zadovoljivo.
○ Slabo.

Ko pomislite na zadnji teden…

		Sploh ne	Malo	Zmerno	Zelo	Skrajno
2.	Ali ste se počutili zdravo in dobro?	○	○	○	○	○
3.	Ali ste bili telesno aktivni (npr. tek, plezanje, kolesarjenje)?	○	○	○	○	○
4.	Ali ste bili zmožni tekati?	○	○	○	○	○
5.	Ali ste se počutili polni energije?	○	○	○	○	○
6.	Ali je bilo vaše življenje prijetno?	○	○	○	○	○
7.	Ali ste bili dobro razpoloženi?	○	○	○	○	○
8.	Ali ste uživali?	○	○	○	○	○

9.	Ali ste se počutili žalostno?	◯	◯	◯	◯	◯
10.	Ali ste se počutili tako slabo, da niste želeli početi nič?	◯	◯	◯	◯	◯
11.	Ali ste se počutili osamljeno?	◯	◯	◯	◯	◯
12.	Ali ste bili veseli s tem kar ste?	◯	◯	◯	◯	◯
13.	Ali ste imeli dovolj časa za sebe?	◯	◯	◯	◯	◯
14.	Ali ste imeli dovolj časa, da naredite stvari, ki jih želite narediti v prostem času?	◯	◯	◯	◯	◯
15.	Ali je/so vaš/i starš/i imel/i dovolj časa za vas?	◯	◯	◯	◯	◯
16.	Ali vas je/so starš/i obravnavali na pošten način?	◯	◯	◯	◯	◯
17.	Ali ste lahko govorili s staršem/starši ko ste želeli?	◯	◯	◯	◯	◯
18.	Ali ste imeli dovolj denarja za stvari, katere imajo tudi vaši prijatelji?	◯	◯	◯	◯	◯
19.	Ali ste imeli dovolj denarja za vaše stroške?	◯	◯	◯	◯	◯
20.	Ali ste preživljali čas s svojimi prijatelji?	◯	◯	◯	◯	◯
21.	Ali ste uživali s svojimi prijatelji?	◯	◯	◯	◯	◯
22.	Ali ste si medsebojno s prijatelji pomagali?	◯	◯	◯	◯	◯
23.	Ali ste se lahko zanesli na svoje prijatelje?	◯	◯	◯	◯	◯

Ko pomislite na zadnji teden…

		Sploh ne	Malo	Zmerno	Zelo	Skrajno
24.	Ali ste bili veseli v šoli?	◯	◯	◯	◯	◯
25.	Ali vam je dobro šlo v šoli?	◯	◯	◯	◯	◯
26.	Ali ste bili zmožni biti pozorni?	◯	◯	◯	◯	◯
27.	Ali ste se dobro razumeli z učitelji?	◯	◯	◯	◯	◯

b) Duševno blagostanje mladostnikov

Spodaj je nekaj trditev o čustvih in mislih. Prosimo označite (●) krogec, ki najbolje opisuje vaše izkustvo z vsako med njimi v zadnjih dveh tednih.

	NIKOLI	REDKO	VČASIH	POGOSTO	VEDNO
Sem optimističen glede prihodnosti.	◯	◯	◯	◯	◯
Počutim se koristno.	◯	◯	◯	◯	◯
Počutim se sproščeno.	◯	◯	◯	◯	◯
Občutim zanimanje za druge ljudi.	◯	◯	◯	◯	◯
Imam energijo, ki jo lahko porabim.	◯	◯	◯	◯	◯
Dobro se soočam s problemi.	◯	◯	◯	◯	◯
Jasno razmišljam.	◯	◯	◯	◯	◯
Dobro se počutim v svoji koži.	◯	◯	◯	◯	◯
Počutim se tesno povezano z drugimi ljudmi.	◯	◯	◯	◯	◯
Občutim zaupanje v sebe.	◯	◯	◯	◯	◯

O stvareh se lahko sam odločam.	◯	◯	◯	◯	◯
Počutim se ljubljeno.	◯	◯	◯	◯	◯
Zanimam se za nove stvari.	◯	◯	◯	◯	◯
Sem dobro razpoložen.	◯	◯	◯	◯	◯

c) Zdravstvena nega

V nadaljevanju so podana vprašanja, ki se nanašajo na delo medicinske sestra na področju duševnega blagostanja mladostnikov. Prosimo, da pri vsakem vprašanju pobarvate krogec pred pravilnim odgovorom ali pisno odgovorite pod *Drugo*.

1. Kdaj ste nazadnje bili na sistematičnemu pregledu?

◯ To leto.

◯ Pred enim letom.

◯ Pred dvema letoma.

◯ Pred tremi leti.

◯ V zadnjih treh letih nisem bil na sistematičnemu pregledu (Z izpolnjevanjem vprašalnika nadaljujte pri »Demografska vprašanja«).

◯ Drugo:_____.

2. Ali ste ob sistematičnemu pregledu imeli skupinske pogovore z medicinsko sestro?

◯ Da.

◯ Ne (Z izpolnjevanjem vprašalnika nadaljujte pri 6. vprašanju).

◯ Ne vem (Z izpolnjevanjem vprašalnika nadaljujte pri 6. vprašanju).

3. Kakšna je bila tematika skupinskega pogovora z medicinsko sestro? (več možnih odgovorov)

- ○ Odraščanje.
- ○ Duševne in telesne spremembe v obdobju mladostništva.
- ○ Počutje v šoli, družini, med vrstniki.
- ○ Življenjske navade.
- ○ Obremenjenost in stres.
- ○ Depresivnost.
- ○ Zloraba drog.
- ○ Tvegan način življenja.
- ○ Šolski uspeh in izostanki iz pouka.
- ○ Telesna aktivnost.
- ○ Spolnost.

4. Ali ste ob sistematičnemu pregledu imeli individualne pogovore z medicinsko sestro?

- ○ Da.
- ○ Ne (Z izpolnjevanjem vprašalnika nadaljujte pri 6. vprašanju).
- ○ Ne vem (Z izpolnjevanjem vprašalnika nadaljujte pri 6. vprašanju).

5. Kakšna je bila tematika individualnega pogovora z medicinsko sestro? (več možnih odgovorov)

- ○ Odraščanje.
- ○ Duševne in telesne spremembe v obdobju mladostništva..
- ○ Počutje v šoli, družini, med vrstniki.
- ○ Življenjske navade.

- ○ Obremenjenost in stres.
- ○ Depresivnost.
- ○ Zloraba drog.
- ○ Tvegan način življenja.
- ○ Šolski uspeh in izostanki iz pouka.
- ○ Telesna aktivnost.
- ○ Spolnost.

6. Kakšno vlogo, po vašem mnenju, ima medicinska sestra pri zagotavljanju duševnega blagostanja mladostnikov?

V nadaljevanju so podana demografska vprašanja. Prosimo, da pri vsakem vprašanju pobarvate krogec pred pravilnim odgovorom ali pisno odgovorite pod *Drugo*.

1. Koliko ste stari?

- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- Drugo: ___

2. Vaš spol?

- Ženski.
- Moški.

3. Katero šolo obiskujete?

- Osnovno šolo.
- Srednjo šolo.

4. Kateri razred/letnik obiskujete?

1
2
3
4
5
6
7
8
9

5. S kom živite? (več možnih odgovorov)

Mamo.
Očetom.
Sestro/Bratom.
Babico.
Dedkom.
Drugo:_____.

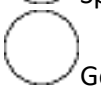
6. V kateri izmed naštetih regij živite?

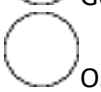
Pomurska.
Podravska.
Koroška.

 Savinjska.

 Zasavska.

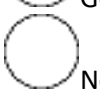
 Spodnjeposavska.

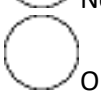
 Gorenjska.

 Osrednjeslovenska.

 Jugovzhodna Slovenija.

 Goriška.

 Notranjo-kraška.

 Obalno-kraška.

 Drugo:_____.

7. Če ste srednješolec, prosimo označite katero srednjo šolo obiskujete.

 Gimnazijo.

 Srednjo zdravstveno šolo.

 Ekonomsko.

 Biotehnično.

 Gradbeno.

 Turistično.

 Vzgojiteljsko.

 Konservatorij za glasbo in balet.

 Trgovsko.

 Upravno administrativno.

◯ Lesarsko.

◯ Prometno.

◯ Računalniško.

◯ Oblikovalsko.

◯ Tehnično.

◯ SS za strojništvo, mehatroniko in medije.

◯ SS za storitvene dejavnosti.

◯ SS za kemijo.

DRUGO:_____

APPENDIX B: PROFESSIONAL RESUME OF THE CANDIDATE

EDUCATION AND WORK EXPERIENCE

PHD IN NURSING SCIENCE – University of Maribor Faculty of Health Sciences

MASTER OF NURSING SCIENCE – University of Maribor Faculty of Health Sciences

REGISTERED NURSE – University of Maribor Faculty of Health Sciences

---

TEACHING ASSISSTANT – University of Maribor Faculty of Health Sciences

PUBLICATIONS

Validation of the Professional Quality of Life Scale among Slovenian and Croatian nurses.
CILAR, Leona, SPEVAN, Marija, MUSOVIĆ, Kasandra, ŠTIGLIC, Gregor. https://cejnm.osu.cz/getrevsrc.php?identification=public&mag=cjn&raid=518&type=fin&ver=5 – 2021

Caring for children and adolescents victims of domestic violence: a qualitative study.
CILAR BUDLER, Leona, STRIČEVIĆ, Jadranka, KEGL, Barbara, PEVEC, Monika, KLANJŠEK, Petra. https://onlinelibrary.wiley.com/doi/10.1111/jonm.13512 - 2021

Development and validation of the type 2 diabetes mellitus 10-year risk score prediction models from survey data.
ŠTIGLIC, Gregor, WANG, Fei, SHEIKH, Aziz, CILAR, Leona. https://www.sciencedirect.com/science/article/pii/S1751991821000528?dgcid=a – 2021

Parental knowledge of chronic inflammatory bowel diseases in a child.
CILAR, Leona, POLAK, Špela, KEGL, Barbara. https://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=372359 – 2021

The effects of gamification and oral self-care on oral hygiene in children: systematic search in app stores and evaluation of apps.
FIJAČKO, Nino, GOSAK, Lucija, CILAR, Leona, NOVŠAK, Alenka, MASTERSON CREBER, Ruth, SKOK, Pavel, https://mhealth.jmir.org/2020/7/e16365 – 2020

Validation of the Warwick-Edinburgh Mental Well-being Scale among nursing students in Slovenia.
CILAR, Leona, PAJNKIHAR, Majda, ŠTIGLIC, Gregor. https://onlinelibrary.wiley.com/doi/10.1111/jonm.13087 – 2021

What motivates students to enter nursing? Findings from a cross-sectional study.
CILAR, Leona, SPEVAN, Marija, ČUČEK-TRIFKOVIČ, Klavdija, ŠTIGLIC, Gregor. https://www.sciencedirect.com/science/article/pii/S0260691719314923 – 2020

Gamification in nursing: a literature review.
FIJAČKO, Nino, GOSAK, Lucija, DEBELJAK, Nika, SKOK, Pavel, ŠTIGLIC, Gregor, CILAR, Leona. https://doi.org/10.14528/snr.2020.54.2.2991 – 2020

Early detection of type 2 diabetes mellitus using machine learning-based prediction models
KOPITAR, Leon, KOCBEK, Primož, CILAR, Leona, SHEIKH, Aziz, ŠTIGLIC, Gregor. https://www.nature.com/articles/s41598-020-68771-z – 2020

Mental well-being among nursing students in Slovenia and Northern Ireland: a survey.
CILAR, Leona, BARR, Owen, ŠTIGLIC, Gregor, PAJNKIHAR, Majda. https://www.sciencedirect.com/science/article/pii/S1471595318305365 – 2019

R you ready? Using the R programme for statistical analysis and graphics.
ŠTIGLIC, Gregor, WATSON, Roger, CILAR, Leona. https://onlinelibrary.wiley.com/doi/epdf/10.1002/nur.21990 – 2019

Development of a screening tool using electronic health records for undiagnosed Type 2 diabetes mellitus and impaired fasting glucose detection in the Slovenian population.
ŠTIGLIC, Gregor, KOCBEK, Primož, CILAR, Leona, FIJAČKO, Nino, STOŽER, Andraž, ZALETEL, Jelka, SHEIK https://onlinelibrary.wiley.com/doi/epdf/10.1111/dme.13605 – 2018

Emotional intelligence among nursing students: findings from a cross-sectional study.
ŠTIGLIC, Gregor, CILAR, Leona, NOVAK, Žiga, VRBNJAK, Dominika, STENHOUSE, Rosemary Clare, SNOWDEN, http://www.nurseeducationtoday.com/article/S0260-6917(18)30153-9/fulltext – 2018

Ukrepi za obravnavo otroka z okužbo zgornjih dihalnih poti: pregled literature.
CILAR, Leona, KEGL, Barbara, PAJNKIHAR, Majda, STRIČEVIĆ, Jadranka, MARČUN-VARDA, Nataša, KLANJŠEK, https://obzornik.zbornica-zveza.si/index.php/ObzorZdravNeg/article/view/3072 – 2021

Complications associated with implantation and use of totally implantable venous access port in pediatric and adult patients: a scoping review.
KLANJŠEK, Petra, GRM, Katarina, NERAT, Jasmina, CILAR, Leona. Complications associated with implant https://hrcak.srce.hr/261392 – 2021

Effectiveness of school-based mental well-being interventions among adolescents: a systematic review.
CILAR, Leona, ŠTIGLIC, Gregor, KMETEC, Sergej, BARR, Owen, PAJNKIHAR, Majda. https://onlinelibrary.wiley.com/doi/abs/10.1111/jan.14408?af=R – 2020

Opis, analiza in vrednotenje teorije medosebnih odnosov Hildegard E. Peplau v pediatrični zdravstveni negi.
CILAR, Leona, PAJNKIHAR, Majda.
https://obzornik.zbornica-zveza.si/index.php/ObzorZdravNeg/article/view/2958 – 2020

Interpretability of machine learning-based prediction models in healthcare.
ŠTIGLIC, Gregor, KOCBEK, Primož, FIJAČKO, Nino, ŽITNIK, Marinka, VERBERT, Katrien, CILAR, Leona. https://onlinelibrary.wiley.com/doi/full/10.1002/widm.1379 – 2020

Reasons for choosing the topic of the doctoral dissertation

Mental well-being is an important and relatively new concept in nursing. Adolescents' mental well-being is closely linked to interpersonal relationships. There is a need for education on the mental well-being of adolescents among adolescents, parents, teachers, and nurses to improve the mental well-being of adolescents worldwide.

APPENDIX C: STATEMENT OF AUTHORSHIP AND IDENTITY BETWEEN PRINTED AND ELECTRONIC FORM OF THE DOCTORAL DISSERTATION
(ANNEX 4 OF THE RULES AND REGULATIONS ON DOCTORAL STUDIES AT UM)

UNIVERSITY OF MARIBOR
FACULTY OF HEALTH SCIENCES

STATEMENT OF AUTHORSHIP AND IDENTITY BETWEEN PRINTED AND ELECTRONIC FORM OF THE DOCTORAL DISSERTATION

Name and surname of the student: LEONA CILAR BUDLER

Study programme: NURSING

Title of the doctoral dissertation: Nursing support in facilitating mental well-being of adolescents

Supervisor: Prof. Majda Pajnkihar, PhD, RN, FAAN, FEANS

Co-supervisor: Assoc. Prof. Gregor Štiglic, PhD and Prof. Owen Barr, PhD, RN

I, LEONA CILAR BUDLER, the undersigned student, hereby

- declare that the doctoral dissertation is the result of my scientific-research work;
- declare that I have obtained all necessary consents for the use of data and copyrighted works, which I have also clearly and duly acknowledged in the doctoral dissertation;
- grant the University of Maribor a gratuitous, non-exclusive, and worldwide right of unlimited duration to store the copyrighted work in electronic form, reproduce it, and give public access to it on the World Wide Web through the DKUM as well as other information databases and providers; declare that I understand that work deposited/published in the DKUM will be accessible to wide public under the conditions of the Creative Commons BY-NC-ND license, which includes online automated indexing as well as processing of texts for the needs of text and data mining, and for extracting knowledge from data; users are allowed to reproduce without altering, distribute, rent, and communicate the copyrighted work to the public as long as the author is properly acknowledged and the work is not used commercially;
- give my consent for publishing my personal data, stated in the final work and in this statement, and the doctoral dissertation;
- declare that the printed form of the final work is identical to the electronic form of the final work submitted for publishing in the DKUM;
- declare that I am informed about ProQuest's conditions for submitting and publishing the doctoral dissertation in the ProQuest Dissertations & Theses Global database (http://contentz.mkt5049.com/lp/43888/382619/PQDTauthoragreement.pdf).

I am applying the more permissive Creative Commons _____ (name the type) licence.

Place and date: Maribor, 2022 Signature of the student: 

APPENDIX D: QUALITY ASSESSMENT OF IDENTIFIED STUDIES

No.	Study design	Study limitations	Inconsistency	Indirectness	Imprecision	Publication bias	GRADE
1	Cluster RCT	Lack of blinding	None	The intervention has taken place in a high-income country	No important precision	Unlikely	++
2	RCT	Did not report loss of follow-up	None	None	None	Unlikely	+++
3	RCT	Week randomization design	None	None	None	Unlikely	+++
4	RCT	Heterogeneous sample; lack of blinding	None	Sample drop-out; Intervention has taken place in a high-income country	None	Unlikely	++
5	Non-randomised control trial	Study design	None	The intervention has taken place in a high-income country	None	Likely	+
6	RCT	Lack of blinding	None	None	None	Unlikely	+++
7	Cluster RCT	Lack of blinding; did not report an intention to treat (ITT)	Unexpected variability in results from other trials	Interventions took place in the high-income country; Students from high and secondary	Not reported confidence intervals (CIs)	Unlikely	+

No.	Study design	Study limitations	Inconsistency	Indirectness	Imprecision	Publication bias	GRADE
				socio-economic status			
8	RCT	Lack of blinding; small sample size in the analysis (< 200); Did not report follow-up process; did not report numbers of those who dropped out	None	Only one school included; intervention taken place in a high-income country	Not reported CIs	Unlikely	+
9	Cluster RCT	Lack of blinding	Results are not comparable with other trials, because a new scale has been used	None	None	Unlikely	+++
10	Cross-sectional study	Study design	None	None	Lack of in-depth comparison between countries	Unlikely	++
11	Non-randomised control trial	Study design	None	The intervention has taken place in a high-income country	Lack of in-depth comparison between countries	Unlikely	+
12	Cluster RCT	Lack of blinding; concealment of allocation; did not	None	The intervention has taken place in a high-income country	None	Unlikely	++

No.	Study design	Study limitations	Inconsistency	Indirectness	Imprecision	Publication bias	GRADE
		report loss of follow-up					
13	RCT	Heterogeneous sample; lack of blinding; did not report follow-up loss	None	The intervention has taken place in a high-income country	None	Unlikely	++
14	Cluster RCT	Lack of clearly randomization allocation sequence; lack of blinding; did not report ITT	None	The intervention has taken place in the high-income country; only two schools included	Not reported confidence intervals (CIs)	Likely	+
15	Cluster RCT, qualitative approach	Study design; Sample – disadvantaged schools; lack of blinding; possible bias	None	None	No important precision	Likely	++
16	Controlled trial	Small sample size (< 200); study design	Unexpected variability in teacher's and children's reports	1 school included	Not reported CIs	Unlikely	+
17	Pilot study	Study design; sample homogeneity; lack of follow-up; small sample size (< 200)	None	One school included; Intervention taken place in a high-income country	Not reported CIs	Unlikely	+
18	Pilot study	Study design; small sample size (< 200); lack of control	None	Two schools included	Not reported CIs	Unlikely	+

No.	Study design	Study limitations	Inconsistency	Indirectness	Imprecision	Publication bias	GRADE
		conditions; lack of follow-up					
19	Quasi-experimental study	Study design; small sample size (< 200); lack of blinding; lack of control group	Unexpected variability in results	1 school included; Intervention taken place in high-income country	None	Unlikely	+
20	Mixed methods study	Small sample size (< 200); lack of blinding; lack of follow-up	None	One school included	Not reported CIs	Unlikely	+
21	Controlled trial	Study design; lack of follow-up	None	One school included	Not reported CIs	Likely	+
22	Controlled trial	Study design; lack of follow-up	None	None	Not reported CIs	Unlikely	++
23	Cluster RCT	Lack of blinding; did not report ITT	Unexpected variability in results	None	None	Likely	+
24	RCT	Sample size	None	One private school included	Not reported CIs	Unlikely	++
25	Quasi-experimental longitudinal design	Study design; Size of sample not clearly described; high dropout rate	Unexpected variability in results from different trials	None	Not reported CIs	Unlikely	++
26	Qualitative study	Study design; bias in support of the intervention	None	None	None	Likely	++

No.	Study design	Study limitations	Inconsistency	Indirectness	Imprecision	Publication bias	GRADE
27	Non-randomised control trial	Study design; no-control group; possible social acceptability bias; no follow-up; lack of blinding; did not report ITT; lack of clearly randomization allocation sequence; small sample size (< 200)	Unexpected variability in results	The intervention has taken place in a high-income country	Not reported CIs	Unlikely	+
28	Non-randomised control trial	Study design; questionable blinding	None	None	Not reported CIs	Unlikely	+++
29	A sequential explanatory mixed-methods study	Lack of blinding; no follow-up; lack of clearly allocation sequence	None	None	Not reported CIs	Likely	++
30	Quasi-experimental study	Study design; Small sample size (< 200)	Unexpected variability in results from different trials	1 school included	Not reported CIs	Likely	+
31	Mixed methods pilot study	A short period of the study; small sample size (< 200); lack of a control group	None	1 school included	Not reported CIs	Likely	++
32	Quasi-Experimental study	Study design; Lack of randomization; lack	None	One school included	Not reported CIs	Unlikely	++

No.	Study design	Study limitations	Inconsistency	Indirectness	Imprecision	Publication bias	GRADE
		of blinding; Small sample size (< 200)					
33	Quasi-Experimental study	Study design; Not randomized school; lack of blinding /	None	One school included	Not reported CIs	Unlikely	++
34	Quasi-experimental study	Study design /	None	None	None	Unlikely	+++
35	Quasi-Experimental study	Study design; Lack of randomization; lack of blinding	None	One school included	Not reported CIs	Unlikely	++
36	RCT	Lack of clearly randomization allocation sequence; did not report ITT; small sample size (< 200)	Unexpected variability in results from different trials	One school included	Not reported CIs	Unlikely	+
37	Multi-method study	Study design; Small sample size (< 200); no control group; no follow-up	None	The intervention has taken place in the high-income country; one school included	None	Likely	++
38	Cluster RCT	Did not report ITT	None	None	None	Unlikely	+++
39	Experimental study	Study design; Possible selection bias; lack of blinding	None	None	Not reported CIs	Unlikely	+++

No.	Study design	Study limitations	Inconsistency	Indirectness	Imprecision	Publication bias	GRADE
40	Cross-sectional study	Study design	None	None	None	Unlikely	+++
41	Quasi-experimental study	Study design /	None	The intervention has taken place in a high-income country	Not reported CIs	Likely	+
42	Quasi-experimental study	Study design /	None	Intervention taken place in high-income country	None	Unlikely	+++
43	Quasi-experimental study	Study design /	None	One school included	Not reported CIs	Unlikely	++
44	Mixed methods study	Study design; Small sample size (< 200)	None	One school included	Not reported CIs	Likely	+
45	Experimental study	Study design	None	None	Not reported CIs	Unlikely	+++
46	Non-randomized cohort study	Study design; lack of randomization; lack of blinding	None	One school included	None	Unlikely	+++
47	Cluster RCT	Sample heterogeneity; blinding was not described	None	One school included	None	Unlikely	+++
48	RCT	None	None	None	Not reported CIs	Unlikely	+++
49	Cluster RCT	Lack of blinding	None	None	None	Unlikely	++++

No.	Study design	Study limitations	Inconsistency	Indirectness	Imprecision	Publication bias	GRADE
50	Quasi-experimental study	Study design; Small sample size (< 200)	None	One school included	None	Unlikely	+++
51	Cluster stratified RCT	Lack of blinding; did not report ITT	None	None	None	Unlikely	++++
52	Pilot RCT	Lack of blinding	None	None	Not reported CIs	Likely	++
53	Qualitative-descriptive study	Study design; small sample size	None	None	/	Unlikely	++
54	RCT	Small sample size (< 200)	Unexpected variability in results from different trials	None	Not reported CIs	Unlikely	++
55	Quasi-experimental study design	Study design; Small sample size (< 200)	None	One school included	Not reported CIs	Unlikely	++
56	Mixed methods study	Study design; small sample size (< 200)	None	None	Not reported CIs	Unlikely	+++
57	Pilot cluster RCT	Poor follow-up	None	None	None	Unlikely	++++

++++ = high; +++ = moderate; ++ = low; + = very low.

APPENDIX E: MENTAL WELL-BEING AND MENTAL HEALTH INTERVENTIONS AND OUTCOMES

No.	Mental Well-being Intervention(s) / Program / Questionnaire(s)	Mental Well-being Outcome
1	Gatehouse Project intervention	✗
2	Developed using existing measures	✓
3	The Gatehouse Project intervention	✗
4	The positive psychology condition (bite back)	✗
5	Mindfulness intervention	✓
6	Positive youth development (PYD)-based sports mentorship program	✓
7	Peer Interpersonal Relatedness (PIR) program; The Resourceful Adolescent Program (RAP)	✗ ✓
8	Positive psychology with acceptance and commitment therapy (Strong Minds)	✓
9	'Switch-off 4 Healthy Minds' (S4HM) intervention	✗
10	Physical activity, sport participation, well-being (WHO-5), depressive symptoms (BDI-II) and anxiety (SAS)	✓
11	Think Health and Wellbeing intervention	✗
12	Physical activity intervention	✗
13	Positive psychology intervention	✗
14	Positive psychology intervention; Self-report questionnaires	✓
15	Zippy's Friends emotional wellbeing programme	✓
16	Mindfulness-based intervention	✗ ✓
17	Mindfulness-based program	✓
18	Positive educative programme (PEP)	✓
19	Mindfulness-based program	✗
20	Challenge to be+ programme	✓
21	A health promotion programme comprising massage and mental training	✗
22	Internet-based program - Professor Gooley and the Flame of Mind	✓
23	The mindfulness-based intervention - the .b ("Dotbe")	✗
24	Mindfulness meditation intervention	✓
25	The SET program	✗ ✓
26	Social and emotional aspects of learning (SEAL) programme	✗ ✓

No.	Mental Well-being Intervention(s) / Program / Questionnaire(s)	Mental Well-being Outcome
27	DRUMBEAT programme	✗
28	School-based drama group therapy (DGT)	✓
29	"Team" model	Not clear
30	Creative Dance and brain dance program	✗
31	The Principle Based Model (PBM) of Mind, Consciousness, and Thought intervention	✓
32	Positive psychology interventions (ppis)	✓
33	A school program for promoting psychological well-being	✓
34	Intervention program regarding adolescents' well-being, based on theory and research	✓ ✗
35	Evidence-based positive-psychology interventions for promoting school-children's mental health	✓
36	Group wellness-promotion intervention	✗
37	ACT in the Outdoors (acceptance and commitment therapy and adventure therapy)	✓
38	Peer-mentoring and participative learning	✗
39	Class-based mindfulness intervention	✗
40	Gardening	✓
41	A six-lesson Web-based programme	✓
42	Minding Young Minds	✓
43	Intervention based on a structured handbook	✓
44	Cognitive behaviour therapy (CBT)	✓
45	Pros and cons; Processes of change; Self-efficacy.	✓
46	Relaxation response-based curriculum	✓
47	Group music therapy	✓
48	School-based mental health programme based on a structured handbook	✓
49	Web-Based Tailored Intervention (E-health4uth) and Consultation	✓
50	A school-based physical activity program	✓ ✗
51	Online self-directed anxiety prevention program	✗
52	Project Wings Girls' Groups	✗
53	Contigo project	✓
54	Well-being promoting and anxiety-management strategies	Not clear

No.	Mental Well-being Intervention(s) / Program / Questionnaire(s)	Mental Well-being Outcome
55	Gratitude-meditation intervention	✓
56	Haven Green Space intervention	✓
57	The WISE intervention	✓

APPENDIX F: CONSENT FOR PARTICIPATION IN THE STUDY

OBRAZEC PROSTOVOLJNE IN ZAVESTNE PRIVOLITVE PO POUČITVI

Podpisani/podpisana_____,rojen/a _____,

sem bila pisno in ustno seznanjen/a s potekom, namenom in cilji raziskave z naslovom:

Podpora zdravstvene nege pri spodbujanju duševnega blagostanja mladostnikov

Vem, kako bo poskrbljeno za mojo varnost v raziskavi in da lahko kadar koli zaprosim za dodatne informacije in jih tudi dobim. Prav tako mi je bilo pojasnjeno, da lahko privolitev prekličem, ne da bi moral/a preklic utemeljiti in ne da bi prenehanje sodelovanja v raziskavi imelo kakršni koli vpliv.

S podpisom prostovoljno potrjujem svojo pripravljenost za sodelovanje v raziskavi.

Dovoljujem, da se moji odgovori uporabijo v anonimizirani obliki v znanstvene namene.

Podpis: _____

Datum: _____

Ime in priimek raziskovalke: _____Leona Cilar_____

Podpis raziskovalke: _____

Datum: _____

APPENDIX G: FOCUS GROUPS INTERVIEW GUIDE FOR ADOLESCENTS IN SLOVENE AND ENGLISH LANGUAGE

1. Kaj za vas pomeni duša? (ali je to povezano z dobrim počutjem? Vero?)

2. Ko govorimo o odnosih na katare odnose pomislite? (prijatelji, družina, sošolci, učitelji?

3. Kakšen ta odnos mora biti? (npr. Kaj pričakujete od prijatelja v medsebojnem/prijateljskem odnosu?)

4. S kom najležje vzpostavite (zaupen) odnos?

5. S kom najlažje govorite o skrbeh (ocene, odnosi, bolezen,…)?

6. Kaj menite, kdo je medicinska sestra? (vloga) Kako medicinska sestra lahko vpliva na vaše duševno dobro počutje?

---

1. What does the soul mean to you? (Is this related to well-being? Faith?)

2. When we talk about relationships, what do you think about? (friends, family, classmates, teachers?

3. What should this relationship be like? (eg What do you expect from a friend in a mutual / friendly relationship?)

4. Who is the easiest to establish a (confidential) relationship with?

5. Who is the easiest person to talk to about worries (grades, relationships, illness,…)?

6. Who do you think is a nurse? (role) How can a nurse affect your mental well-being?

APPENDIX H: FOCUS GROUPS INTERVIEW GUIDE FOR PARENTS IN SLOVENE AND ENGLISH LANGUAGE

1. Kako bi ocenili duševno zdravje in dobro počutje Vašega otroka?

2. Ali menite, da Vaš otrok dobi zadostno podporo duševnemu zdravju in dobremu počutju s strani zdravstvenega sistema?

3. Kako menite, da bi se lahko zdravstveni sistem vključil v preventivo in promocijo duševnega zdravja mladostnikov?

4. Ali menite, da se izvaja dovolj preventivnih aktivnostih, ki so v podporo duševnem zdravju mladostnikom?

5. Ali menite, da Vaš otrok dobi zadostno podporo duševnemu zdravju in dobremu počutju s strani izobraževalne inštitucije?

6. Kakšni so Vaši predlogi za izboljšanje duševnega zdravja in dobrega počutja z strani zdravstva?

---

1. How would you rate your child's mental health and well-being?

2. Do you think that your child receives sufficient support for mental health and well-being from the health system?

3. How do you think the health system could be involved in the prevention and promotion of adolescent mental health?

4. Do you think that sufficient preventive activities are being carried out to support the mental health of adolescents?

5. Do you think that your child receives sufficient support for mental health and well-being from the educational institution?

6. What are your suggestions for improving mental health and well-being by healthcare?

APPENDIX I: FOCUS GROUPS INTERVIEW GUIDE FOR TEACHERS IN SLOVENE AND ENGLISH LANGUAGE

1. Kaj razumete pod pojmom duševno blagostanje mladostnikov?
2. Kaj menite, kdo lahko zagotavlja (vpliva na) duševno blagostanje mladostnikov?
3. Kako odnosi s starši lahko vplivajo na duševno blagostanje mladostnikov?
4. Kako odnosi s prijatelji vplivajo na duševno blagostanje mladostnikov?
5. Kakšno vlogo imajo učitelji pri zagotavljanju duševnega blagostanja mladostnikov?
6. Ali menite, da ima medicinska sestra kakšen vpliv na duševno blagostanje mladostnikov? Zakaj?
7. Kaj bi lahko storili v namen zagotovitve boljšega duševnega blagostanja mladostnikov? Medicinske sestre? Zakonodajalci?

---

1. What do you mean by the mental well-being of adolescents?
2. Who do you think can ensure (influence) the mental well-being of adolescents?
3. How can relationships with parents affect the mental well-being of adolescents?
4. How do relationships with friends affect the mental well-being of adolescents?
5. What role do teachers play in ensuring the mental well-being of adolescents?
6. Do you think that a nurse has any impact on the mental well-being of adolescents? Why?
7. What could be done to ensure better mental well-being of adolescents? Nurses? Legislators?

APPENDIX J: FOCUS GROUPS INTERVIEW GUIDE FOR RNS IN SLOVENE AND ENGLISH LANGUAGE

1. Kaj za vas pomeni duševno blagostanje mladostnikov?

2. Kdo lahko vpliva na duševno blagostanje mladostnikov?

3. Kako lahko starši, učitelji, prijatelji, medicinske sestre in zakonodajalci vplivajo na duševno blagostanje mladostnikov?

4. Ali menite, da medicinske sestre imajo dovolj znanja in kompetenc na podoročju duševnega blagostanja mladostnikov?

5. Kaj bi lahko medicinske sestre ali zakonodajalci storili v namen zagotovitve bojšega duševnega blagostanja?

---

1. What does the adolescent mental well-being mean to you?

2. Who can influence adolescent's mental well-being?

3. How can parents, teachers, friends, RNs and legislators affect adolescent's mental well-being?

4. Do you think RNs have enough knowledge and competencies in the field of adolescent's mental well-being?

5. What could RNs or legislators do to ensure better adolescents mental well-being?

APPENDIX K: FOCUS GROUPS INTERVIEW GUIDE FOR LEGISLATORS IN SLOVENE AND ENGLISH LANGUAGE

1. Kaj razumete pod pojmom duševno blagostanje mladostnikov?

2. Kako menite, da bi se lahko zdravstveni sistem vključil v preventivo in promocijo duševnega zdravja mladostnikov?

3. Ali medicinske sestre imajo dovolj znanja, kompetenc? Kaj menite o trendih v tujini (npr. Medicinska sestra z dodatnimi znanji)?

4. Kaj bi lahko storili na področju zdravstva in zakonodaje v namen izboljšanja duševnega blagostanja mladostnikov?

---

1. What do you mean by the mental well-being of adolescents?

2. How do you think the health system could be involved in the prevention and promotion of adolescent mental health?

3. Do nurses have enough knowledge, competencies? What do you think about trends abroad (e.g. a nurse with additional knowledge)?

4. What could be done in the field of health and legislation to improve the mental well-being of young people?

APPENDIX L: ETHICAL PERMISSION

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZDRAVJE
Komisija Republike Slovenije za medicinsko etiko

asist. Leona Cilar, mag. zdr. nege
Univerza v Mariboru
Fakulteta za zdravstvene vede
Žitna ulica 15
2000 Maribor

leonacilar@gmail.com, leona.cilar1@um.si

Številka: 0120-313/2019/13
Datum: 10. oktober 2019

Zadeva: Ocena etičnosti predložene raziskave

Spoštovani,

Komisija Republike Slovenije za medicinsko etiko (KME) je dne 7. 6. 2019 (datirano z datumom 21. 5. 2019) od vas prejela vlogo za oceno etičnosti raziskave z naslovom "Podpora zdravstvene nege pri spodbujanju duševnega blagostanja mladostnikov ".

Raziskava bo potekala v okviru vaše doktorske disertacije na Univerzi v Mariboru Fakulteti za zdravstvene vede. Mentor bo prof. dr. (Združeno kraljestvo Velike Britanije in Severne Irske) Majda Pajnkihar in somentorja izr. prof. dr. Gregor Štiglic in prof. dr. Owen Barr.

KME je na seji 16. julija 2019[1] obravnavala vašo vlogo in ugotovila, da slednja ni popolna, zato vas je pozvala k dopolnitvi. Za izvedbo raziskave je potrebno priložiti soglasje ravnateljev osnovnih in srednjih šol ter soglasje staršev anketiranih osnovnošolcev in nepolnoletnih mladostnikov, kakor tudi izjave sodelujočih v raziskavi o zavestni in svobodni privolitvi.

Na KME ste 11. 9. 2019 na podlagi poziva k dopolnitvi vloge z dne 2. 8. 2019 naslovili dopolnitev vloge.

KME je na seji 17. septembra 2019[2] ugotovila, da je vaša dopolnitev k vlogi popolna in da je raziskava etično sprejemljiva. S tem vam za njeno izvedbo izdaja svoje soglasje.

P.S.: Pri morebitnih nadaljnjih dopisih v zvezi z raziskavo se obvezno sklicujte na številko tega dopisa.

S spoštovanjem,

Pripravila:
Maja Žejn

dr. Božidar Voljč, dr. med.,
predsednik KME

[1] Seznam članov KME, ki so odločali o vlogi, in izjava, da KME deluje v skladu z zadevnimi zakoni in priporočili, sta na voljo na spletni strani KME (zavihek "Meni", rubrika "Seje").
[2] Seznam članov KME, ki so odločali o vlogi, in izjava, da KME deluje v skladu z zadevnimi zakoni in priporočili, sta na voljo na spletni strani KME (zavihek "Meni", rubrika "Seje").

Štefanova ulica 5, 1000 Ljubljana, T: 01 478 60 01, T: 01 478 69 13, F: 01 478 60 58
E: gp.mz@gov.si, kme.mz@gov.si, www.kme-nmec.si

APPENDIX M: MOKKEN SCALING FOR KIDSCREEN-27 SUBSCALES ITEMS

		Homogeneity levels										
Scale	**Item**	**.05**	**.10**	**.15**	**.20**	**.25**	**.30**	**.35**	**.40**	**.45**	**.50**	**.55**
Physical well-being	General health	1	1	1	1	1	0	0	0	0	0	0
	Feeling healthy	1	1	1	1	1	1	1	1	1	1	1
	Physical activity	1	1	1	1	1	1	1	1	0	2	0
	Ability to run	1	1	1	1	1	1	1	1	1	2	0
	Energy	1	1	1	1	1	1	1	1	1	1	1
Psychological well-being	Life	1	1	1	1	1	1	1	1	1	1	1
	Good mood	1	1	1	1	1	1	1	1	1	1	1
	Enjoy	1	1	1	1	1	1	1	1	1	1	1
	Sad	1	1	1	1	1	1	1	1	1	2	2
	Bad	1	1	1	1	1	1	1	1	2	2	2
	Lonely	1	1	1	1	1	1	1	0	2	2	0
	Happy	1	1	1	1	1	1	1	1	1	1	0
Autonomy and parent relation	Free time	1	1	1	1	1	1	1	1	1	1	1
	Free activities	1	1	1	1	1	1	1	1	1	1	1
	Time parents	1	1	1	1	1	1	2	2	2	2	2
	Parents fair	1	1	1	1	1	1	2	2	2	2	2
	Parents talk	1	1	1	1	1	1	2	2	2	2	2
	Money friends	1	1	1	1	1	1	2	3	3	3	3
	Money expenses	1	1	1	1	1	1	2	3	3	3	3
Peers and social	Free time friends	1	1	1	1	1	1	1	1	1	1	1
	Enjoy friends	1	1	1	1	1	1	1	1	1	1	1

		Homogeneity levels										
Scale	**Item**	**.05**	**.10**	**.15**	**.20**	**.25**	**.30**	**.35**	**.40**	**.45**	**.50**	**.55**
	Help friends	1	1	1	1	1	1	1	1	1	1	1
	Reliability friends	1	1	1	1	1	1	1	1	1	1	1
School environment	Happy school	1	1	1	1	1	1	1	1	1	1	1
	Good school	1	1	1	1	1	1	1	1	1	1	1
	Attention	1	1	1	1	1	1	1	1	1	0	0
	Good relations	1	1	1	1	1	1	1	1	1	0	0

APPENDIX N: EXAMPLES OF ANSWERS IN OPEN-ENDED QUESTION

Answer
She can change our opinions, reflections and actions.
To advise us and help us understand our problem.
She can change our opinions and certain things and make it easier for us to grow up.
Ensuring a healthy life.
In various lectures she is important to explain to adolescents' certain problems and also help them individually to cope with these problems.
Helping any adolescent who finds themselves in any problem.
To help us grow and understand our body and help with various problems.
To make us aware of a good and healthy lifestyle.
Quite significant as she is experienced and can help adolescents with their problems.
That we can rely on her when we need anything to do with health
That you can ask her whatever you are interested in and she will try to answer your question as much as possible. You should not be ashamed to ask what interests you.
That she offers a conversation, if the adolescent asks for, she himself, but if not, at least she asks for his well-being.
Important! I think most people approach nurses. They know how to empathize, help and be patient
The nurse can explain to adolescents or talk to individuals about the adolescent's mental state. She can help them.
Provides information and ways to maintain health. She can help the adolescent with advice and recommendations.

To advise them on various things, to listen to them and to point them in the right health direction

The nurse gives advice on mental health, refer the child / adolescent for professional help if she / she sees that the adolescent is using she. Gives tips for better self-esteem.

Talking to an adolescent, identifying potential problems, counselling

I think that the nurse plays an important role in ensuring the mental well-being of adolescents that they know how to work properly with adolescents

Talking to him, giving him advice, giving the patient the feeling that she can trust her. She will feel better if she puts things out of himself because in my anguish and she is better for someone else to help him.

Through health education, she teaches about mental health issues and encourages them to talk about it. Above all, she observes adolescents and their behaviour well.

That adolescent takes care of his hygiene, helps him in accepting and the problems that the adolescent gets in his way, informs him / her about the consequences, various mental illnesses and disorders, listens to him if she has problems…

She plays an important role. She gives us moral support, understanding. Tell us about different phenomena.

A lot, because she is a person we can trust and know that she will not tell anyone, she will make things easier for us, given what is bothering us

The nurse plays an important role in this, as she advises the adolescent and can impart experience

Make the patient feel safe and loved

The nurse has the role to advise us on the health and life aspects. To explain to us that our feelings are normal and how to manage them. And also, how to deal with them.

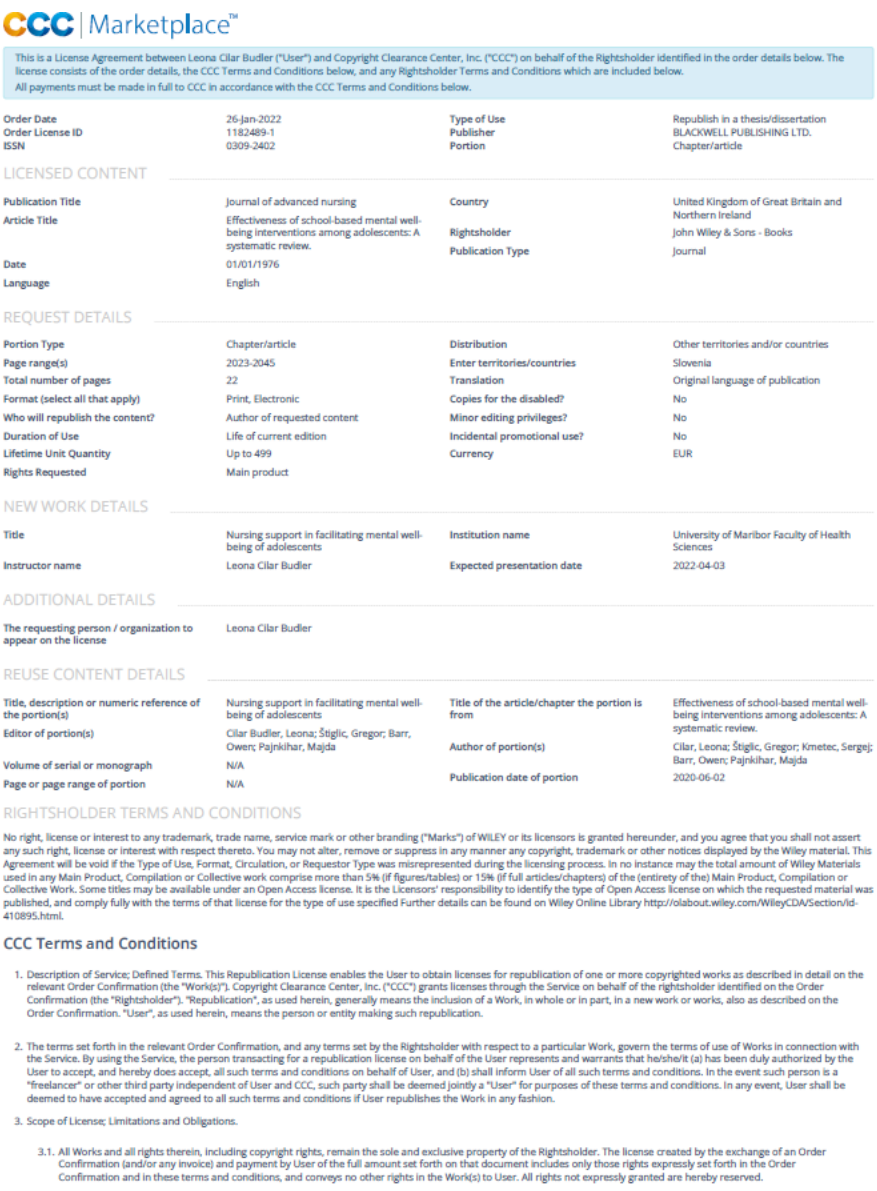
Assures them that everything is OK with them and that they are calm, you can easily talk to your nurse about things that you cannot with your parents

Important, because she introduces us to things we did not know and thus helps us to cope well and properly and overcome something that is ours.

Could inform parents about changes in adolescent mood, alert them to symptoms or characters that are crucial and to which parents should pay more attention to, give parents tips on how to "handle" adolescents, etc.

She plays an important role as she is an educated person with knowledge of these problems

Appendix O: License Agreement for the article published in the Journal of advanced nursing



CCC | Marketplace™

This is a License Agreement between Leona Cilar Budler ("User") and Copyright Clearance Center, Inc. ("CCC") on behalf of the Rightsholder identified in the order details below. The license consists of the order details, the CCC Terms and Conditions below, and any Rightsholder Terms and Conditions which are included below.
All payments must be made in full to CCC in accordance with the CCC Terms and Conditions below.

Order Date	26-Jan-2022	Type of Use	Republish in a thesis/dissertation
Order License ID	1182489-1	Publisher	BLACKWELL PUBLISHING LTD.
ISSN	0309-2402	Portion	Chapter/article

LICENSED CONTENT

Publication Title	Journal of advanced nursing	Country	United Kingdom of Great Britain and Northern Ireland
Article Title	Effectiveness of school-based mental well-being interventions among adolescents: A systematic review.	Rightsholder	John Wiley & Sons - Books
		Publication Type	Journal
Date	01/01/1976		
Language	English		

REQUEST DETAILS

Portion Type	Chapter/article	Distribution	Other territories and/or countries
Page range(s)	2023-2045	Enter territories/countries	Slovenia
Total number of pages	22	Translation	Original language of publication
Format (select all that apply)	Print, Electronic	Copies for the disabled?	No
Who will republish the content?	Author of requested content	Minor editing privileges?	No
Duration of Use	Life of current edition	Incidental promotional use?	No
Lifetime Unit Quantity	Up to 499	Currency	EUR
Rights Requested	Main product		

NEW WORK DETAILS

Title	Nursing support in facilitating mental well-being of adolescents	Institution name	University of Maribor Faculty of Health Sciences
Instructor name	Leona Cilar Budler	Expected presentation date	2022-04-03

ADDITIONAL DETAILS

The requesting person / organization to appear on the license	Leona Cilar Budler

REUSE CONTENT DETAILS

Title, description or numeric reference of the portion(s)	Nursing support in facilitating mental well-being of adolescents	Title of the article/chapter the portion is from	Effectiveness of school-based mental well-being interventions among adolescents: A systematic review.
Editor of portion(s)	Cilar Budler, Leona; Štiglic, Gregor; Barr, Owen; Pajnkihar, Majda	Author of portion(s)	Cilar, Leona; Štiglic, Gregor; Kmetec, Sergej; Barr, Owen; Pajnkihar, Majda
Volume of serial or monograph	N/A	Publication date of portion	2020-06-02
Page or page range of portion	N/A		

RIGHTSHOLDER TERMS AND CONDITIONS

No right, license or interest to any trademark, trade name, service mark or other branding ("Marks") of WILEY or its licensors is granted hereunder, and you agree that you shall not assert any such right, license or interest with respect thereto. You may not alter, remove or suppress in any manner any copyright, trademark or other notices displayed by the Wiley material. This Agreement will be void if the Type of Use, Format, Circulation, or Requestor Type was misrepresented during the licensing process. In no instance may the total amount of Wiley Materials used in any Main Product, Compilation or Collective work comprise more than 5% (if figures/tables) or 15% (if full articles/chapters) of the (entirety of the) Main Product, Compilation or Collective Work. Some titles may be available under an Open Access license. It is the Licensors' responsibility to identify the type of Open Access license on which the requested material was published, and comply fully with the terms of that license for the type of use specified Further details can be found on Wiley Online Library http://olabout.wiley.com/WileyCDA/Section/id-410895.html.

CCC Terms and Conditions

1. Description of Service; Defined Terms. This Republication License enables the User to obtain licenses for republication of one or more copyrighted works as described in detail on the relevant Order Confirmation (the "Work(s)"). Copyright Clearance Center, Inc. ("CCC") grants licenses through the Service on behalf of the rightsholder identified on the Order Confirmation (the "Rightsholder"). "Republication", as used herein, generally means the inclusion of a Work, in whole or in part, in a new work or works, also as described on the Order Confirmation. "User", as used herein, means the person or entity making such republication.

2. The terms set forth in the relevant Order Confirmation, and any terms set by the Rightsholder with respect to a particular Work, govern the terms of use of Works in connection with the Service. By using the Service, the person transacting for a republication license on behalf of the User represents and warrants that he/she/it (a) has been duly authorized by the User to accept, and hereby does accept, all such terms and conditions on behalf of User, and (b) shall inform User of all such terms and conditions. In the event such person is a "freelancer" or other third party independent of User and CCC, such party shall be deemed jointly a "User" for purposes of these terms and conditions. In any event, User shall be deemed to have accepted and agreed to all such terms and conditions if User republishes the Work in any fashion.

3. Scope of License; Limitations and Obligations.

   3.1. All Works and all rights therein, including copyright rights, remain the sole and exclusive property of the Rightsholder. The license created by the exchange of an Order Confirmation (and/or any invoice) and payment by User of the full amount set forth on that document includes only those rights expressly set forth in the Order Confirmation and in these terms and conditions, and conveys no other rights in the Work(s) to User. All rights not expressly granted are hereby reserved.

3.2. General Payment Terms: You may pay by credit card or through an account with us payable at the end of the month. If you and we agree that you may establish a standing account with CCC, then the following terms apply: Remit Payment to: Copyright Clearance Center, 29118 Network Place, Chicago, IL 60673-1291. Payments Due: Invoices are payable upon their delivery to you (or upon our notice to you that they are available to you for downloading). After 30 days, outstanding amounts will be subject to a service charge of 1-1/2% per month or, if less, the maximum rate allowed by applicable law. Unless otherwise specifically set forth in the Order Confirmation or in a separate written agreement signed by CCC, invoices are due and payable on "net 30" terms. While User may exercise the rights licensed immediately upon issuance of the Order Confirmation, the license is automatically revoked and is null and void, as if it had never been issued, if complete payment for the license is not received on a timely basis either from User directly or through a payment agent, such as a credit card company.

3.3. Unless otherwise provided in the Order Confirmation, any grant of rights to User (i) is "one-time" (including the editions and product family specified in the license), (ii) is non-exclusive and non-transferable and (iii) is subject to any and all limitations and restrictions (such as, but not limited to, limitations on duration of use or circulation) included in the Order Confirmation or invoice and/or in these terms and conditions. Upon completion of the licensed use, User shall either secure a new permission for further use of the Work(s) or immediately cease any new use of the Work(s) and shall render inaccessible (such as by deleting or by removing or severing links or other locators) any further copies of the Work (except for copies printed on paper in accordance with this license and still in User's stock at the end of such period).

3.4. In the event that the material for which a republication license is sought includes third party materials (such as photographs, illustrations, graphs, inserts and similar materials) which are identified in such material as having been used by permission, User is responsible for identifying, and seeking separate licenses (under this Service or otherwise) for, any of such third party materials; without a separate license, such third party materials may not be used.

3.5. Use of proper copyright notice for a Work is required as a condition of any license granted under the Service. Unless otherwise provided in the Order Confirmation, a proper copyright notice will read substantially as follows: "Republished with permission of [Rightsholder's name], from [Work's title, author, volume, edition number and year of copyright]; permission conveyed through Copyright Clearance Center, Inc. " Such notice must be provided in a reasonably legible font size and must be placed either immediately adjacent to the Work as used (for example, as part of a by-line or footnote but not as a separate electronic link) or in the place where substantially all other credits or notices for the new work containing the republished Work are located. Failure to include the required notice results in loss to the Rightsholder and CCC, and the User shall be liable to pay liquidated damages for each such failure equal to twice the use fee specified in the Order Confirmation, in addition to the use fee itself and any other fees and charges specified.

3.6. User may only make alterations to the Work if and as expressly set forth in the Order Confirmation. No Work may be used in any way that is defamatory, violates the rights of third parties (including such third parties' rights of copyright, privacy, publicity, or other tangible or intangible property), or is otherwise illegal, sexually explicit or obscene. In addition, User may not conjoin a Work with any other material that may result in damage to the reputation of the Rightsholder. User agrees to inform CCC if it becomes aware of any infringement of any rights in a Work and to cooperate with any reasonable request of CCC or the Rightsholder in connection therewith.

4. Indemnity. User hereby indemnifies and agrees to defend the Rightsholder and CCC, and their respective employees and directors, against all claims, liability, damages, costs and expenses, including legal fees and expenses, arising out of any use of a Work beyond the scope of the rights granted herein, or any use of a Work which has been altered in any unauthorized way by User, including claims of defamation or infringement of rights of copyright, publicity, privacy or other tangible or intangible property.

5. Limitation of Liability. UNDER NO CIRCUMSTANCES WILL CCC OR THE RIGHTSHOLDER BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING WITHOUT LIMITATION DAMAGES FOR LOSS OF BUSINESS PROFITS OR INFORMATION, OR FOR BUSINESS INTERRUPTION) ARISING OUT OF THE USE OR INABILITY TO USE A WORK, EVEN IF ONE OF THEM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In any event, the total liability of the Rightsholder and CCC (including their respective employees and directors) shall not exceed the total amount actually paid by User for this license. User assumes full liability for the actions and omissions of its principals, employees, agents, affiliates, successors and assigns.

6. Limited Warranties. THE WORK(S) AND RIGHT(S) ARE PROVIDED "AS IS". CCC HAS THE RIGHT TO GRANT TO USER THE RIGHTS GRANTED IN THE ORDER CONFIRMATION DOCUMENT. CCC AND THE RIGHTSHOLDER DISCLAIM ALL OTHER WARRANTIES RELATING TO THE WORK(S) AND RIGHT(S), EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ADDITIONAL RIGHTS MAY BE REQUIRED TO USE ILLUSTRATIONS, GRAPHS, PHOTOGRAPHS, ABSTRACTS, INSERTS OR OTHER PORTIONS OF THE WORK (AS OPPOSED TO THE ENTIRE WORK) IN A MANNER CONTEMPLATED BY USER; USER UNDERSTANDS AND AGREES THAT NEITHER CCC NOR THE RIGHTSHOLDER MAY HAVE SUCH ADDITIONAL RIGHTS TO GRANT.

7. Effect of Breach. Any failure by User to pay any amount when due, or any use by User of a Work beyond the scope of the license set forth in the Order Confirmation and/or these terms and conditions, shall be a material breach of the license created by the Order Confirmation and these terms and conditions. Any breach not cured within 30 days of written notice thereof shall result in immediate termination of such license without further notice. Any unauthorized (but licensable) use of a Work that is terminated immediately upon notice thereof may be liquidated by payment of the Rightsholder's ordinary license price therefor; any unauthorized (and unlicensable) use that is not terminated immediately for any reason (including, for example, because materials containing the Work cannot reasonably be recalled) will be subject to all remedies available at law or in equity, but in no event to a payment of less than three times the Rightsholder's ordinary license price for the most closely analogous licensable use plus Rightsholder's and/or CCC's costs and expenses incurred in collecting such payment.

8. Miscellaneous.

8.1. User acknowledges that CCC may, from time to time, make changes or additions to the Service or to these terms and conditions, and CCC reserves the right to send notice to the User by electronic mail or otherwise for the purposes of notifying User of such changes or additions; provided that any such changes or additions shall not apply to permissions already secured and paid for.

8.2. Use of User-related information collected through the Service is governed by CCC's privacy policy, available online here:https://marketplace.copyright.com/rs-ui-web/mp/privacy-policy

8.3. The licensing transaction described in the Order Confirmation is personal to User. Therefore, User may not assign or transfer to any other person (whether a natural person or an organization of any kind) the license created by the Order Confirmation and these terms and conditions or any rights granted hereunder; provided, however, that User may assign such license in its entirety on written notice to CCC in the event of a transfer of all or substantially all of User's rights in the new material which includes the Work(s) licensed under this Service.

8.4. No amendment or waiver of any terms is binding unless set forth in writing and signed by the parties. The Rightsholder and CCC hereby object to any terms contained in any writing prepared by the User or its principals, employees, agents or affiliates and purporting to govern or otherwise relate to the licensing transaction described in the Order Confirmation, which terms are in any way inconsistent with any terms set forth in the Order Confirmation and/or in these terms and conditions or CCC's standard operating procedures, whether such writing is prepared prior to, simultaneously with or subsequent to the Order Confirmation, and whether such writing appears on a copy of the Order Confirmation or in a separate instrument.

8.5. The licensing transaction described in the Order Confirmation document shall be governed by and construed under the law of the State of New York, USA, without regard to the principles thereof of conflicts of law. Any case, controversy, suit, action, or proceeding arising out of, in connection with, or related to such licensing transaction shall be brought, at CCC's sole discretion, in any federal or state court located in the County of New York, State of New York, USA, or in any federal or state court whose geographical jurisdiction covers the location of the Rightsholder set forth in the Order Confirmation. The parties expressly submit to the personal jurisdiction and venue of each such federal or state court.If you have any comments or questions about the Service or Copyright Clearance Center, please contact us at 978-750-8400 or send an e-mail to support@copyright.com.

Appendix P: License Agreement for the article published in the Journal of nursing management

CCC | Marketplace™

This is a License Agreement between Leona Cilar Budler ("User") and Copyright Clearance Center, Inc. ("CCC") on behalf of the Rightsholder identified in the order details below. The license consists of the order details, the CCC Terms and Conditions below, and any Rightsholder Terms and Conditions which are included below.
All payments must be made in full to CCC in accordance with the CCC Terms and Conditions below.

Order Date	26-Jan-2022	Type of Use	Republish in a thesis/dissertation
Order License ID	1182488-1	Publisher	BLACKWELL PUBLISHING
ISSN	1365-2834	Portion	Chapter/article

LICENSED CONTENT

Publication Title	Journal of nursing management	Publication Type	e-Journal
Article Title	Validation of the Warwick-Edinburgh Mental Well-being Scale among nursing students in Slovenia.	Start Page	1335
		End Page	1346
Date	01/01/1993	Issue	6
Language	English	Volume	28
Country	United Kingdom of Great Britain and Northern Ireland	URL	http://firstsearch.oclc.org/journal=0966-0...
Rightsholder	John Wiley & Sons - Books		

REQUEST DETAILS

Portion Type	Chapter/article	Distribution	Other territories and/or countries
Page range(s)	1335-1346	Enter territories/countries	Slovenia
Total number of pages	11	Translation	Original language of publication
Format (select all that apply)	Print, Electronic	Copies for the disabled?	No
Who will republish the content?	Author of requested content	Minor editing privileges?	No
Duration of Use	Life of current edition	Incidental promotional use?	No
Lifetime Unit Quantity	Up to 499	Currency	EUR
Rights Requested	Main product		

NEW WORK DETAILS

Title	Nursing support in facilitating mental well-being of adolescents	Institution name	University of Maribor Faculty of Health Sciences
Instructor name	Leona Cilar Budler	Expected presentation date	2022-04-03

ADDITIONAL DETAILS

The requesting person / organization to appear on the license	Leona Cilar Budler

REUSE CONTENT DETAILS

Title, description or numeric reference of the portion(s)	Nursing support in facilitating mental well-being of adolescents	Title of the article/chapter the portion is from	Validation of the Warwick-Edinburgh Mental Well-being Scale among nursing students in Slovenia.
Editor of portion(s)	Cilar Budler, Leona; Barr, Owen; Pajnkihar, Majda; Štiglic, Gregor	Author of portion(s)	Cilar, Leona; Pajnkihar, Majda; Štiglic, Gregor
Volume of serial or monograph	28		
Page or page range of portion	1335-1346	Publication date of portion	2020-09-01

RIGHTSHOLDER TERMS AND CONDITIONS

No right, license or interest to any trademark, trade name, service mark or other branding ("Marks") of WILEY or its licensors is granted hereunder, and you agree that you shall not assert any such right, license or interest with respect thereto. You may not alter, remove or suppress in any manner any copyright, trademark or other notices displayed by the Wiley material. This Agreement will be void if the Type of Use, Format, Circulation, or Requestor Type was misrepresented during the licensing process. In no instance may the total amount of Wiley Materials used in any Main Product, Compilation or Collective work comprise more than 5% (if figures/tables) or 15% (if full articles/chapters) of the (entirety of the) Main Product, Compilation or Collective Work. Some titles may be available under an Open Access license. It is the Licensors' responsibility to identify the type of Open Access license on which the requested material was published, and comply fully with the terms of that license for the type of use specified Further details can be found on Wiley Online Library http://olabout.wiley.com/WileyCDA/Section/id-410895.html.

CCC Terms and Conditions

1. Description of Service; Defined Terms. This Republication License enables the User to obtain licenses for republication of one or more copyrighted works as described in detail on the relevant Order Confirmation (the "Work(s)"). Copyright Clearance Center, Inc. ("CCC") grants licenses through the Service on behalf of the rightsholder identified on the Order Confirmation (the "Rightsholder"). "Republication", as used herein, generally means the inclusion of a Work, in whole or in part, in a new work or works, also as described on the Order Confirmation. "User", as used herein, means the person or entity making such republication.

2. The terms set forth in the relevant Order Confirmation, and any terms set by the Rightsholder with respect to a particular Work, govern the terms of use of Works in connection with the Service. By using the Service, the person transacting for a republication license on behalf of the User represents and warrants that he/she/It (a) has been duly authorized by the User to accept, and hereby does accept, all such terms and conditions on behalf of User, and (b) shall inform User of all such terms and conditions. In the event such person is a "freelancer" or other third party independent of User and CCC, such party shall be deemed jointly a "User" for purposes of these terms and conditions. In any event, User shall be deemed to have accepted and agreed to all such terms and conditions if User republishes the Work in any fashion.

3. Scope of License; Limitations and Obligations.

   3.1. All Works and all rights therein, including copyright rights, remain the sole and exclusive property of the Rightsholder. The license created by the exchange of an Order Confirmation (and/or any invoice) and payment by User of the full amount set forth on that document includes only those rights expressly set forth in the Order Confirmation and in these terms and conditions, and conveys no other rights in the Work(s) to User. All rights not expressly granted are hereby reserved.

3.2. General Payment Terms: You may pay by credit card or through an account with us payable at the end of the month. If you and we agree that you may establish a standing account with CCC, then the following terms apply: Remit Payment to: Copyright Clearance Center, 29118 Network Place, Chicago, IL 60673-1291. Payments Due: Invoices are payable upon their delivery to you (or upon our notice to you that they are available to you for downloading). After 30 days, outstanding amounts will be subject to a service charge of 1-1/2% per month or, if less, the maximum rate allowed by applicable law. Unless otherwise specifically set forth in the Order Confirmation or in a separate written agreement signed by CCC, invoices are due and payable on "net 30" terms. While User may exercise the rights licensed immediately upon issuance of the Order Confirmation, the license is automatically revoked and is null and void, as if it had never been issued, if complete payment for the license is not received on a timely basis either from User directly or through a payment agent, such as a credit card company.

3.3. Unless otherwise provided in the Order Confirmation, any grant of rights to User (i) is "one-time" (including the editions and product family specified in the license), (ii) is non-exclusive and non-transferable and (iii) is subject to any and all limitations and restrictions (such as, but not limited to, limitations on duration of use or circulation) included in the Order Confirmation or invoice and/or in these terms and conditions. Upon completion of the licensed use, User shall either secure a new permission for further use of the Work(s) or immediately cease any new use of the Work(s) and shall render inaccessible (such as by deleting or by removing or severing links or other locators) any further copies of the Work (except for copies printed on paper in accordance with this license and still in User's stock at the end of such period).

3.4. In the event that the material for which a republication license is sought includes third party materials (such as photographs, illustrations, graphs, inserts and similar materials) which are identified in such material as having been used by permission, User is responsible for identifying, and seeking separate licenses (under this Service or otherwise) for, any of such third party materials; without a separate license, such third party materials may not be used.

3.5. Use of proper copyright notice for a Work is required as a condition of any license granted under the Service. Unless otherwise provided in the Order Confirmation, a proper copyright notice will read substantially as follows: "Republished with permission of [Rightsholder's name], from [Work's title, author, volume, edition number and year of copyright]; permission conveyed through Copyright Clearance Center, Inc. " Such notice must be provided in a reasonably legible font size and must be placed either immediately adjacent to the Work as used (for example, as part of a by-line or footnote but not as a separate electronic link) or in the place where substantially all other credits or notices for the new work containing the republished Work are located. Failure to include the required notice results in loss to the Rightsholder and CCC, and the User shall be liable to pay liquidated damages for each such failure equal to twice the use fee specified in the Order Confirmation, in addition to the use fee itself and any other fees and charges specified.

3.6. User may only make alterations to the Work if and as expressly set forth in the Order Confirmation. No Work may be used in any way that is defamatory, violates the rights of third parties (including such third parties' rights of copyright, privacy, publicity, or other tangible or intangible property), or is otherwise illegal, sexually explicit or obscene. In addition, User may not conjoin a Work with any other material that may result in damage to the reputation of the Rightsholder. User agrees to inform CCC if it becomes aware of any infringement of any rights in a Work and to cooperate with any reasonable request of CCC or the Rightsholder in connection therewith.

4. Indemnity. User hereby indemnifies and agrees to defend the Rightsholder and CCC, and their respective employees and directors, against all claims, liability, damages, costs and expenses, including legal fees and expenses, arising out of any use of a Work beyond the scope of the rights granted herein, or any use of a Work which has been altered in any unauthorized way by User, including claims of defamation or infringement of rights of copyright, publicity, privacy or other tangible or intangible property.

5. Limitation of Liability. UNDER NO CIRCUMSTANCES WILL CCC OR THE RIGHTSHOLDER BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING WITHOUT LIMITATION DAMAGES FOR LOSS OF BUSINESS PROFITS OR INFORMATION, OR FOR BUSINESS INTERRUPTION) ARISING OUT OF THE USE OR INABILITY TO USE A WORK, EVEN IF ONE OF THEM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In any event, the total liability of the Rightsholder and CCC (including their respective employees and directors) shall not exceed the total amount actually paid by User for this license. User assumes full liability for the actions and omissions of its principals, employees, agents, affiliates, successors and assigns.

6. Limited Warranties. THE WORK(S) AND RIGHT(S) ARE PROVIDED "AS IS". CCC HAS THE RIGHT TO GRANT TO USER THE RIGHTS GRANTED IN THE ORDER CONFIRMATION DOCUMENT. CCC AND THE RIGHTSHOLDER DISCLAIM ALL OTHER WARRANTIES RELATING TO THE WORK(S) AND RIGHT(S), EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ADDITIONAL RIGHTS MAY BE REQUIRED TO USE ILLUSTRATIONS, GRAPHS, PHOTOGRAPHS, ABSTRACTS, INSERTS OR OTHER PORTIONS OF THE WORK (AS OPPOSED TO THE ENTIRE WORK) IN A MANNER CONTEMPLATED BY USER; USER UNDERSTANDS AND AGREES THAT NEITHER CCC NOR THE RIGHTSHOLDER MAY HAVE SUCH ADDITIONAL RIGHTS TO GRANT.

7. Effect of Breach. Any failure by User to pay any amount when due, or any use by User of a Work beyond the scope of the license set forth in the Order Confirmation and/or these terms and conditions, shall be a material breach of the license created by the Order Confirmation and these terms and conditions. Any breach not cured within 30 days of written notice thereof shall result in immediate termination of such license without further notice. Any unauthorized (but licensable) use of a Work that is terminated immediately upon notice thereof may be liquidated by payment of the Rightsholder's ordinary license price therefor; any unauthorized (and unlicensable) use that is not terminated immediately for any reason (including, for example, because materials containing the Work cannot reasonably be recalled) will be subject to all remedies available at law or in equity, but in no event to a payment of less than three times the Rightsholder's ordinary license price for the most closely analogous licensable use plus Rightsholder's and/or CCC's costs and expenses incurred in collecting such payment.

8. Miscellaneous.

8.1. User acknowledges that CCC may, from time to time, make changes or additions to the Service or to these terms and conditions, and CCC reserves the right to send notice to the User by electronic mail or otherwise for the purposes of notifying User of such changes or additions; provided that any such changes or additions shall not apply to permissions already secured and paid for.

8.2. Use of User-related information collected through the Service is governed by CCC's privacy policy, available online here:https://marketplace.copyright.com/rs-ui-web/mp/privacy-policy

8.3. The licensing transaction described in the Order Confirmation is personal to User. Therefore, User may not assign or transfer to any other person (whether a natural person or an organization of any kind) the license created by the Order Confirmation and these terms and conditions or any rights granted hereunder; provided, however, that User may assign such license in its entirety on written notice to CCC in the event of a transfer of all or substantially all of User's rights in the new material which includes the Work(s) licensed under this Service.

8.4. No amendment or waiver of any terms is binding unless set forth in writing and signed by the parties. The Rightsholder and CCC hereby object to any terms contained in any writing prepared by the User or its principals, employees, agents or affiliates and purporting to govern or otherwise relate to the licensing transaction described in the Order Confirmation, which terms are in any way inconsistent with any terms set forth in the Order Confirmation and/or in these terms and conditions or CCC's standard operating procedures, whether such writing is prepared prior to, simultaneously with or subsequent to the Order Confirmation, and whether such writing appears on a copy of the Order Confirmation or in a separate instrument.

8.5. The licensing transaction described in the Order Confirmation document shall be governed by and construed under the law of the State of New York, USA, without regard to the principles thereof of conflicts of law. Any case, controversy, suit, action, or proceeding arising out of, in connection with, or related to such licensing transaction shall be brought, at CCC's sole discretion, in any federal or state court located in the County of New York, State of New York, USA, or in any federal or state court whose geographical jurisdiction covers the location of the Rightsholder set forth in the Order Confirmation. The parties expressly submit to the personal jurisdiction and venue of each such federal or state court.If you have any comments or questions about the Service or Copyright Clearance Center, please contact us at 978-750-8400 or send an e-mail to support@copyright.com.