UNIVERSITETET I BERGEN
Det medisinske fakultet

INNKALLING TIL MØTE I PROGRAMUTVALG MEDISIN

Onsdag 17. April 2024 kl 13.15 - 15.30

Styrerommet AHH eller digitalt (se lenke i innkalling).

Observatører er velkomne til å delta digitalt.

I. **Godkjenning av innkalling og saksliste**
II. **Referat fra sist møte 7. februar 2024**
III. **Saker fra studentene**
IV. **Løypemelding Vestlandslegen i Stavanger**

Tent. tid	nr.	Tittel
13:30	**5/24**	Drøfingssak: Evaluering av medisinstudiet 2023 - Årlig egenvurdering 2023 - Studiebarometeret 2023 - Hovedoppgave i medisin skrevet av Emilie Sandve Aase: The Well-being of Medical students – A study of how medical school impacts the mental health of medical student av the University of Bergen
14:05	**Pause**	
14:15	**6/24**	Drøftingssak: Søylene i medisinstudiet - Akademisk søyle og profesjonalitetssøylen
14:45	**7/24**	Drøftingssak: Evaluering av PUM

Orienteringer:

- Forskning i profesjonssøylen
- Referat fra styringsgruppen Vestlandslegen 05.02.24
- Referat fra Felles utdanningsråd med Helse Bergen og Haraldsplass 23.02.24
- Referat fra Utdanningsråd med Bergen kommune 05.03.24
- Referat fra felles utdanningsråd med SUS 05.03.24

- Referat fra samarbeidsmøte med Helse Fonna 08.03.24
- Retningslinjer for utdanningssamarbeid på nivå 3 med SUS er godkjent.

Kommende saker:

- Orientering fra Olav Tenstad: Hvordan bruke kunstig intelligens i arbeid med vurdering: fra å lage eksamensoppgaver til å sensurere besvarelser.

UNIVERSITETET I BERGEN
Det medisinske fakultet

Arkivkode:	**Programutvalg medisin**
Sak nr.: 5/24	Møte: 17.04.24

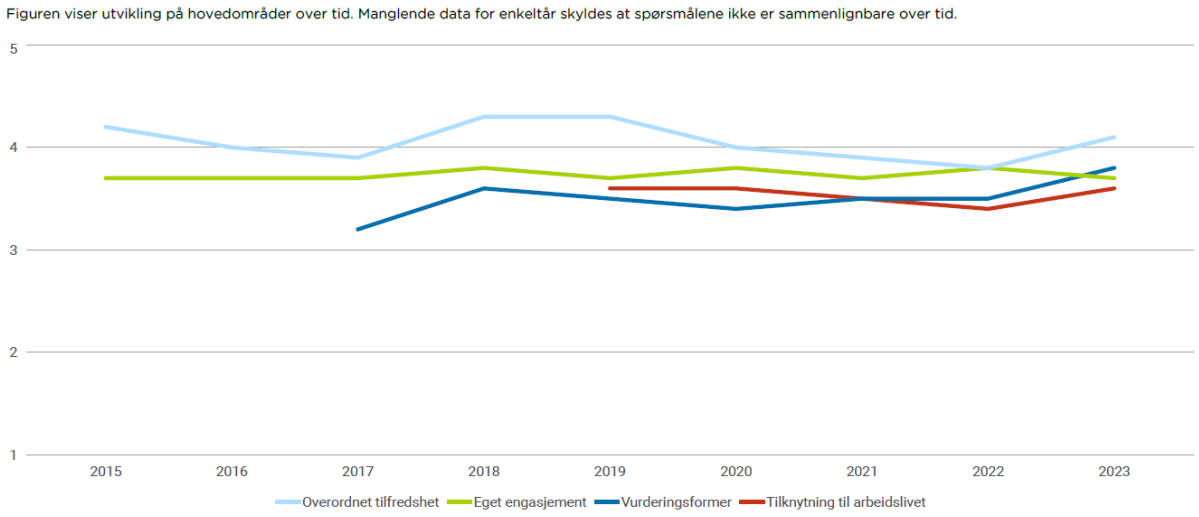
Drøfting: Evaluering av medisinstudiet 2023

Årlig egenvurdering

Medisinstudiet skal levere en årlig egenvurdering av medisinstudiet til fakultetet. Egenvurderingen fra medisinstudiet 2023 tar for seg hva Programutvalget i medisin (PUM) arbeidet med i 2023, og hva som ønskes å arbeide videre med fremover. I år ble PUM bedt om å rapportere inn deltakelse på ikke-obligatorisk undervisning og om studentene har tilstrekkelige språkkunnskaper. Egenvurderingen tok også for seg studiebarometeret og hvordan medisinstudiet skåret for 2023. Årlig egenvurdering 2023 ligger som vedlegg til saken.

Studiebarometeret

Resultatene fra studiebarometeret er relativt like som tidligere år.



Tabell hentet fra studiebarometeret 2023

Vi ser i studiebarometeret at gjennomsnittlig tidsbruk pr uke har gått ned på 2. studieår fra 40,15 til 35,26 timer pr uke. Femte studieår er stabilt på rundt 47 timer pr uke. Siden spørsmålet ble gitt i studiebarometeret i 2014 har rapportert gjennomsnittlig tidsbruk på 2. studieår aldri vært så lavt. Da dette er nytt fra 2023, vet vi ikke om dette er en trend eller en engangsrapportering. Vi bør derfor se på dette tallet igjen i 2024.

Vedlagt saken ligger resultater fra studiebarometeret for medisinstudiet ved UiB for 2023. Ved å besøke nettsiden for studiebarometeret, kan man finne resultater på hvert enkelt spørsmål og sammenligne utdanninger opp mot hverandre. Nettside for studiebarometeret finnes her: https://www.studiebarometeret.no/no/

Sammendrag av hovedoppgave i medisin skrevet av student Emilie Sandve Aase

The Well-being of Medical students – A study of how medical school impacts the mental health of medical student av the University of Bergen

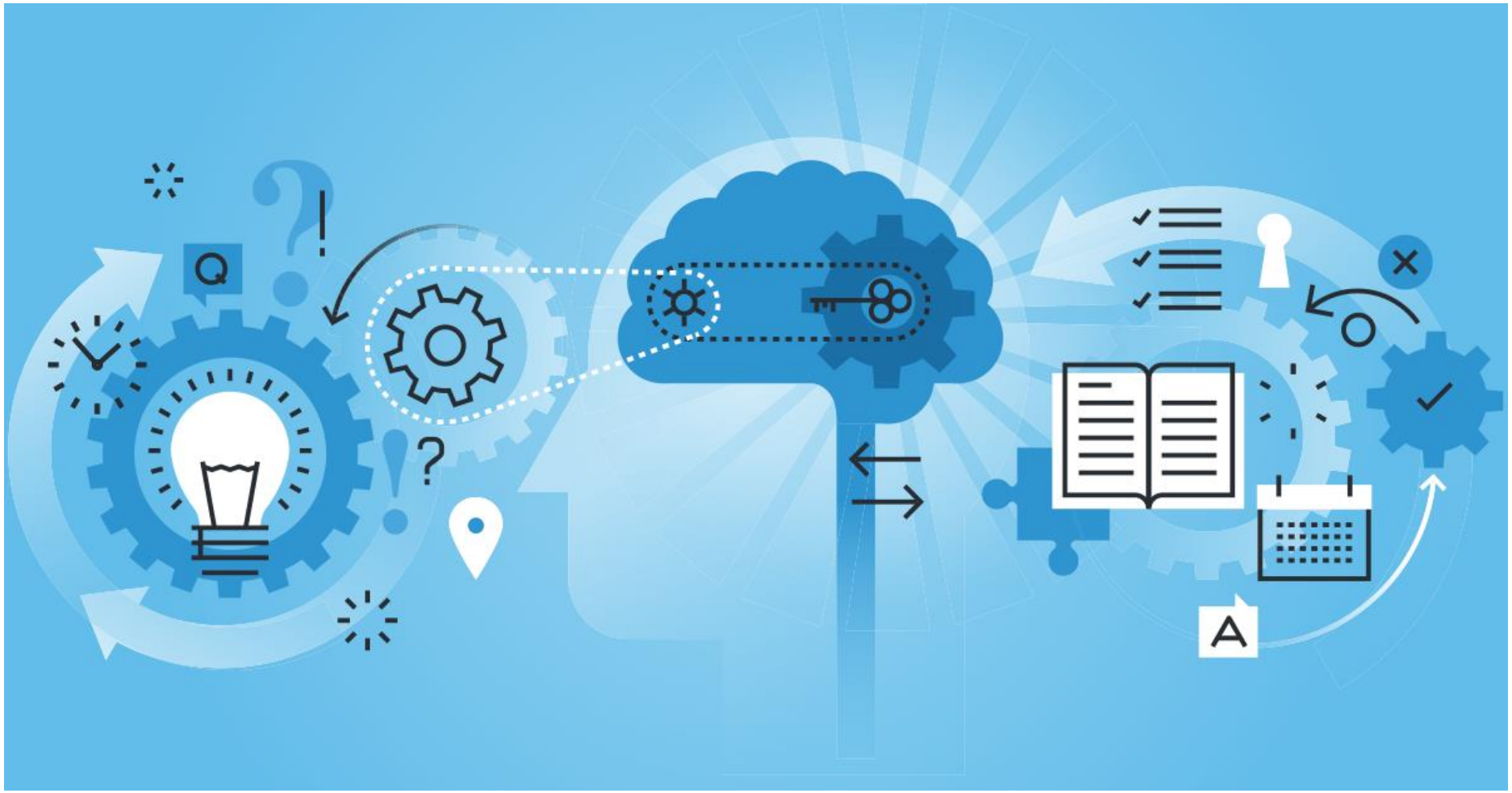
I flere tiår har forskere dokumentert at stress relatert til legeutdannelsen er et betydelig problem. Psykiske plager er vanlig blant medisinstudenter. Mange opplever høye nivåer av angst, utbrenthet, depresjon og selvmordstanker sammenliknet med den generelle befolkningen. Forskningsfunn tyder på at utbrenthet blant medisinstudenter er et globalt fenomen som ofte vedvarer i legeyrket. Studier har fastslått at medisinstudenter starter studiene sine med en robust mental helse, der de er mindre utbrent og har lik livskvalitet som ikke-medisinske studenter. Imidlertid har medisinstudenter en betydelig nedgang i fysisk, psykisk og emosjonell helse i løpet av det første studieåret på medisinstudiet. Gjennom studieårene blir mange av studentene nedbrutt, som gjør dem sårbare for utmattelse og utbrenthet, og for noen fører dette til depresjon og selvmordstanker. I denne studiens spørreundersøkelsen blant 1101 medisinstudenter i Bergen, med en svarprosent på 69.5 %, fant vi at 42 % (n = 306) av medisinstudentene ved UiB rapporterer utbrenthet, og 51% (n = 385) screener positivt for depresjon. Sammenlignet med trivselsundersøkelsen som ble gjennomført ved UiB i 2012 fant vi en nedgang i studenttilfredsheten i dagens studentmasse. Sammenlikninger av studenttilfredsheten mellom de medisinske fakultetene i Norge viser at studentene ved UiB skårer gjennomgående lavt over flere år. Vitenskapelige artikler har vist at målrettede strukturelle endringer i medisinstudiet kan redusere utbrenthet og depresjon, øke studentenes tilfredshet og ha en positiv effekt på akademiske prestasjoner. Tiltakene som er nødvendige for å oppnå slike resultater, er veldokumenterte, billige og i prinsippet enkle å innføre.

Hovedoppgaven i sin helhet ligger som vedlegg til saken.

Oversikt over vedlegg

- Årlig egenvurdering av medisinstudiet 2023 (krever pålogging)
- Studiebarometeret for medisinstudiet 2023
- Hovedoppgave i medisin skrevet av student Emilie Sandve Aase: The Well-being of Medical students – A study of how medical school impacts the mental health of medical student av the University of Bergen

Studiebarometeret 2023



OM UNDERSØKELSEN

NOKUT

Studiebarometeret

NOKUT gjennomfører den nasjonale spørreundersøkelsen om studentenes opplevde studiekvalitet på oppdrag fra Kunnskapsdepartementet.

Data i denne rapporten

Rapporten er laget for å hjelpe institusjonene i kvalitetsarbeidet. Institusjonene får i tillegg anonymiserte rådata. Det utarbeides ikke rapporter eller vises data for program/enheter med færre enn 6 svarende.

Tallene i rapporten kan i noen tilfeller avvike noe fra tallene på studiebarometeret.no. Dette skyldes at tallene i rapporten kun baserer seg på 2023-data, mens vi legger til data for fjoråret for små programmer i nettportalen. NOKUT og Rambøll bruker ulike metoder i beregning av *indeksverdier*, dette kan i noen få tilfeller medføre små forskjeller i tallene.

Hvem inngår?

Undersøkelsen ble gjennomført høsten 2023, og gikk ut til ca. 72 000 studenter i andre studieår på bachelor- og masterprogram, samt i femte studieår på integrerte masterprogram og lange profesjonsutdanninger.

Om svarprosenten

Svarprosenten baserer seg på alle respondenter som *startet* å besvare undersøkelsen. De fleste respondentene fyller ut hele eller nesten hele skjemaet.

Tema for undersøkelsen og spørreskjemaet

Undersøkelsen tar for seg ulike sider av studiekvalitet ved programmet studentene går på. I tillegg finnes flere spørsmål om engasjement og tidsbruk. I utgangspunktet får alle studentene de samme spørsmålene, uavhengig av type studieprogram. Imidlertid stilles spørsmålene om praksis bare til studenter som oppgir at de har hatt praksis. I tillegg kunne institusjonene velge å inkludere (maksimalt to av) tre valgbare spørsmålsbatterier, som stilles deres egne studenter.

Skjemaet baserer seg på erfaringer fra norske og utenlandske spørreskjema, og er kommet til som et resultat av et samarbeid mellom NOKUT og sektoren. Vi bruker primært en 5-delt Likert-skala, der 5 er mest fornøyd / mest enig.

De fleste spørsmålene er uendret over tid og gir dermed tidsserier.

Studiebarometeret.no

I nettportalen er det mulig å sammenligne studieprogram. Portalen er et verktøy for høyskoler, universitet og andre som ønsker å finne informasjon om studentenes oppfatninger av kvaliteten. 2023-tallene blir publisert på nettportalen i midten av februar 2024. Portalen inneholder tidsserier og detaljerte data (standardavvik, svarfordeling m.m.) per spørsmål per studieprogram (klikk på «> Detaljert informasjon» til høyre under søylediagrammene).

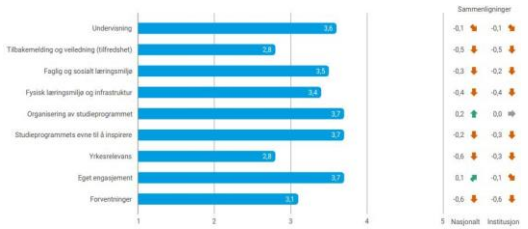
Mer informasjon: http://studiebarometeret.no/no/artikkel/2

FORKLARINGSSIDE

I denne rapporten presenteres resultatene på alle spørsmålene fra Studiebarometeret 2023. Øverst til venstre står navn på studieprogram, fakultet eller institusjon denne rapporten gjelder for. Resultatene presenteres tematisk, slik det fremgår av overskriften øverst på hver side. Informasjon om antall respondenter og svarprosent finnes på forsiden.

HOVEDOMRÅDER

Diagrammet oppsummerer resultatene av undersøkelsens hovedområder. Indeksverdiene er beregnet ved å legge sammen vurderingen av alle enkeltspørsmålene innenfor hvert tema. Til høyre for figuren sammenlignes resultatene med tall for året før, samt resultatet for institusjonen. Grønt indikerer positive avvik, mens rødt indikerer negative avvik.



TOPP OG BUNN, ENDRING OVER TID

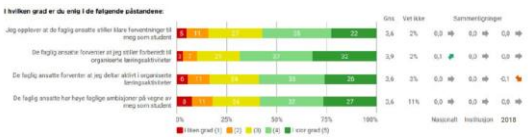
På side 4 vises de fem spørsmålene som skårer høyest og de fem som skårer lavest i undersøkelsen for enheten rapporten gjelder for. En del spørsmål er ikke med i akkurat dette tallgrunnlaget. Det gjelder bl.a. spørsmålene om eget læringsutbytte, tidsbruk og praksis.

På de neste sidene vises spørsmålene som avviker mest fra det nasjonale gjennomsnittet, og fra året før. De samme spørsmålene som nevnt ovenfor inngår ikke der.

Utvikling på hovedområder viser endring de siste årene for de fleste hovedområdene.

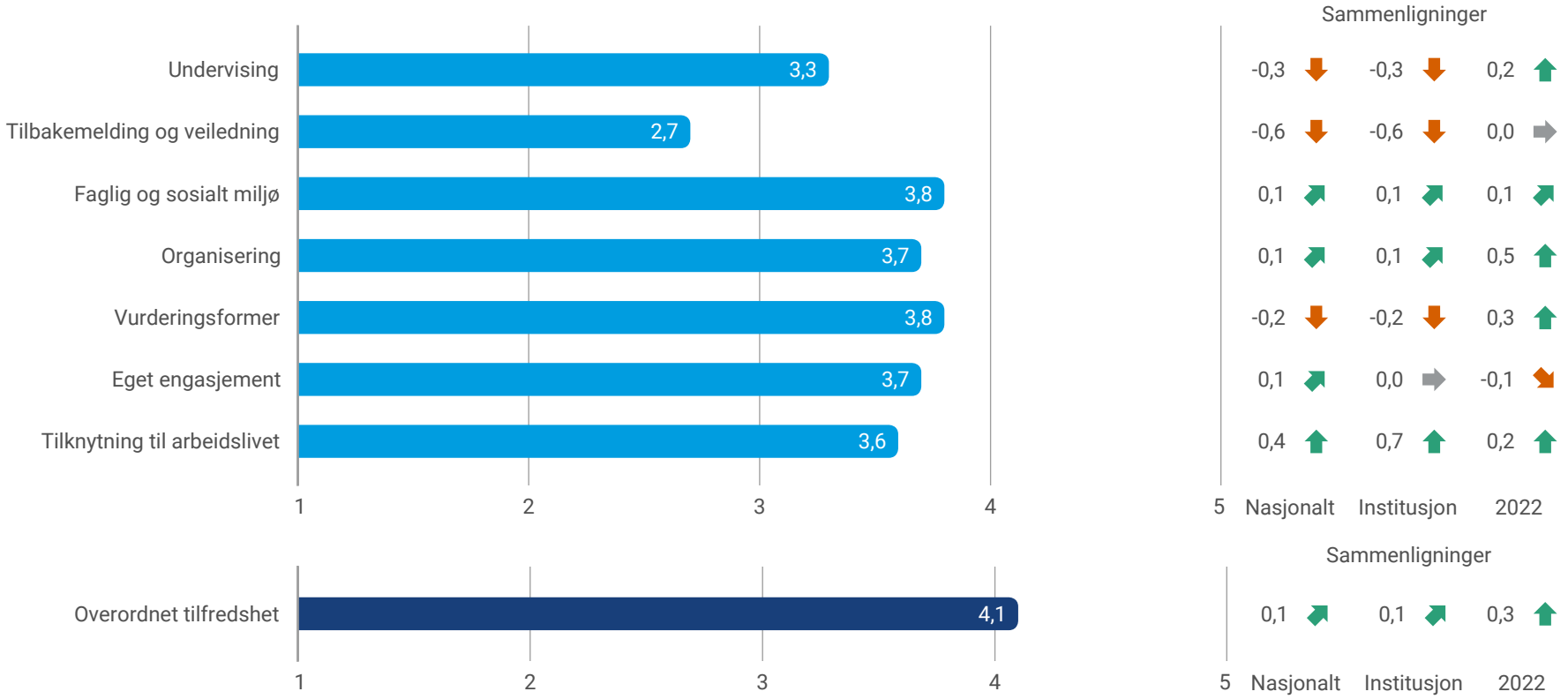
RESULTATOVERSIKT

Hoveddelen av rapporten består av resultater på enkeltspørsmål. Øverst på hver side vises hvilket hovedområde spørsmålene tilhører. Resultatene blir presentert grafisk som frekvenser (dvs. svarfordeling). Positive svar er markert med grønne farger, mens svar i lavere kategorier markert med gule/oransje/røde farger. Svaralternativet "Vet ikke" er ikke inkludert i svarfordelingen, men andelen vises til høyre for figuren. Til høyre for figuren vises også gjennomsnitt. Lengst til høyre sammenlignes enheten med resultatet fra året før og nasjonalt/institusjonen. Til venstre for figuren vises gjennomsnitt for spørsmålet.



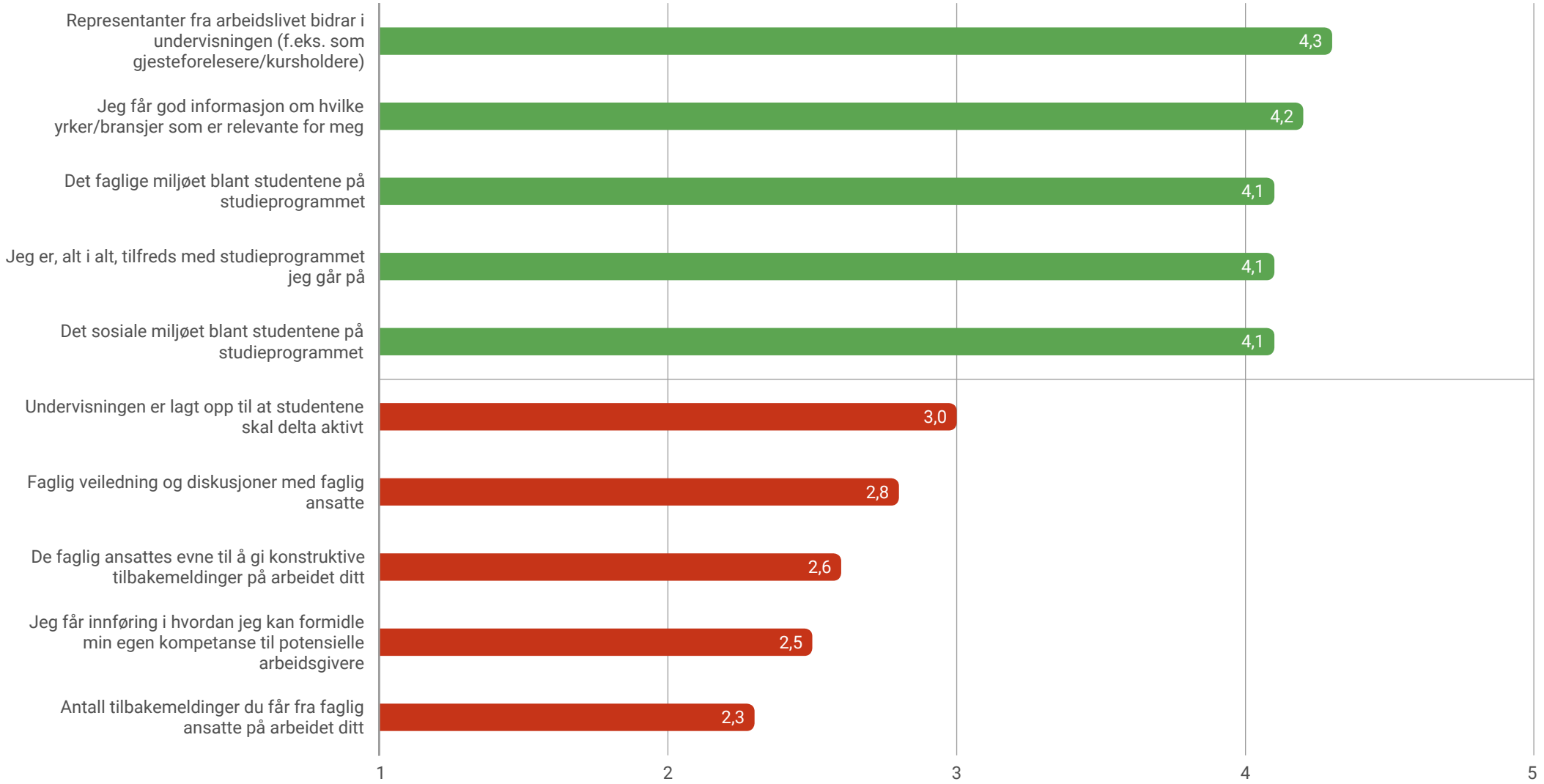
HOVEDOMRÅDER

Spørsmålene i undersøkelsen er gruppert i hovedområder, som hver består av flere enkeltspørsmål innenfor et overordnet tema.
Unntatt er Overordnet tilfredshet, som angir ett spørsmål: «Jeg er, alt i alt, tilfreds med studieprogrammet jeg går på».



TOPP/BUNN

Nedenfor vises de fem enkeltspørsmålene som blir vurdert høyest og lavest av studentene. Spørsmålene kan være en indikasjon på styrker og utfordringer.



STØRST AVVIK FRA LANDSGJENNOMSNITTET

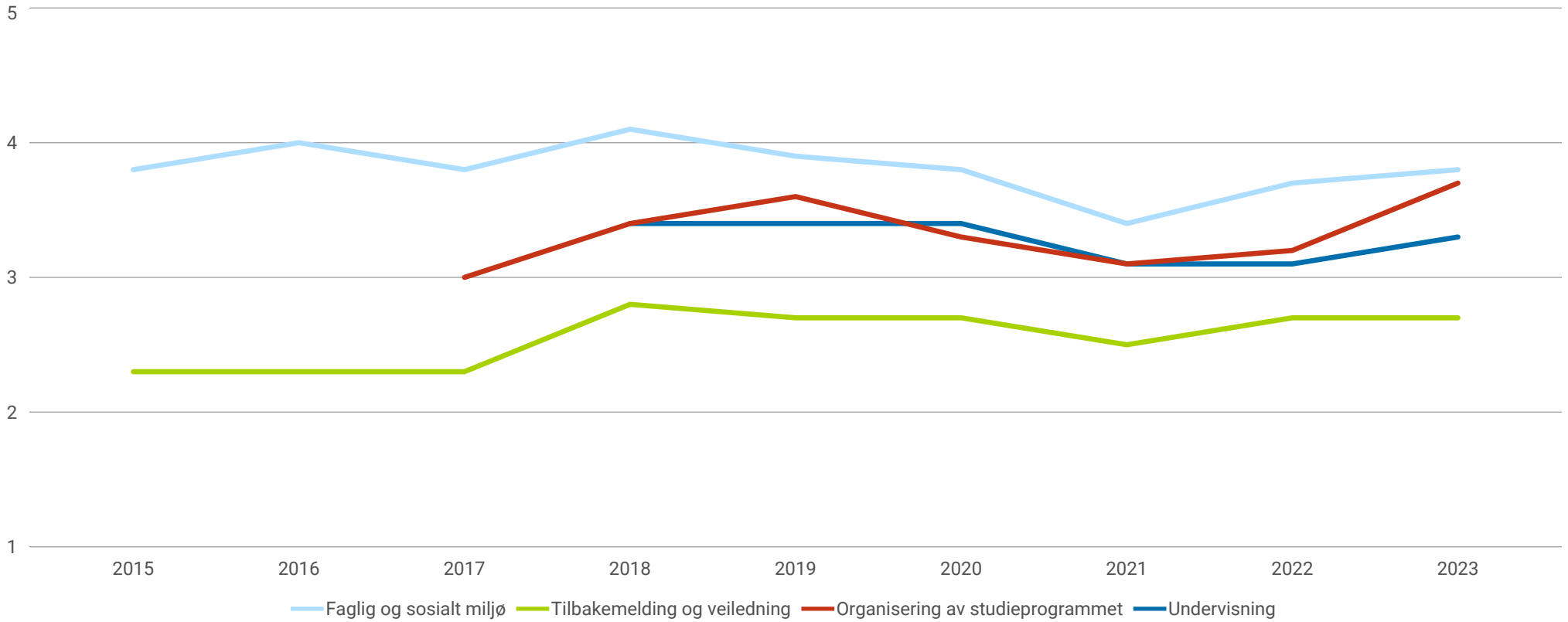
Nedenfor vises de fem enkeltspørsmålene som avviker mest positivt og mest negativt sammenlignet med det nasjonale gjennomsnittet. Om det vises færre enn fem søyler, er det fordi det er færre enn fem spørsmål som skiller seg positivt/negativt.

STØRST AVVIK FRA 2022

Nedenfor vises de fem enkeltspørsmålene som avviker mest positivt og mest negativt sammenlignet med resultatet fra i fjor. Om det vises færre enn fem søyler, er det fordi det er færre enn fem spørsmål som skiller seg positivt/negativt.

UTVIKLING PÅ HOVEDOMRÅDER - 1

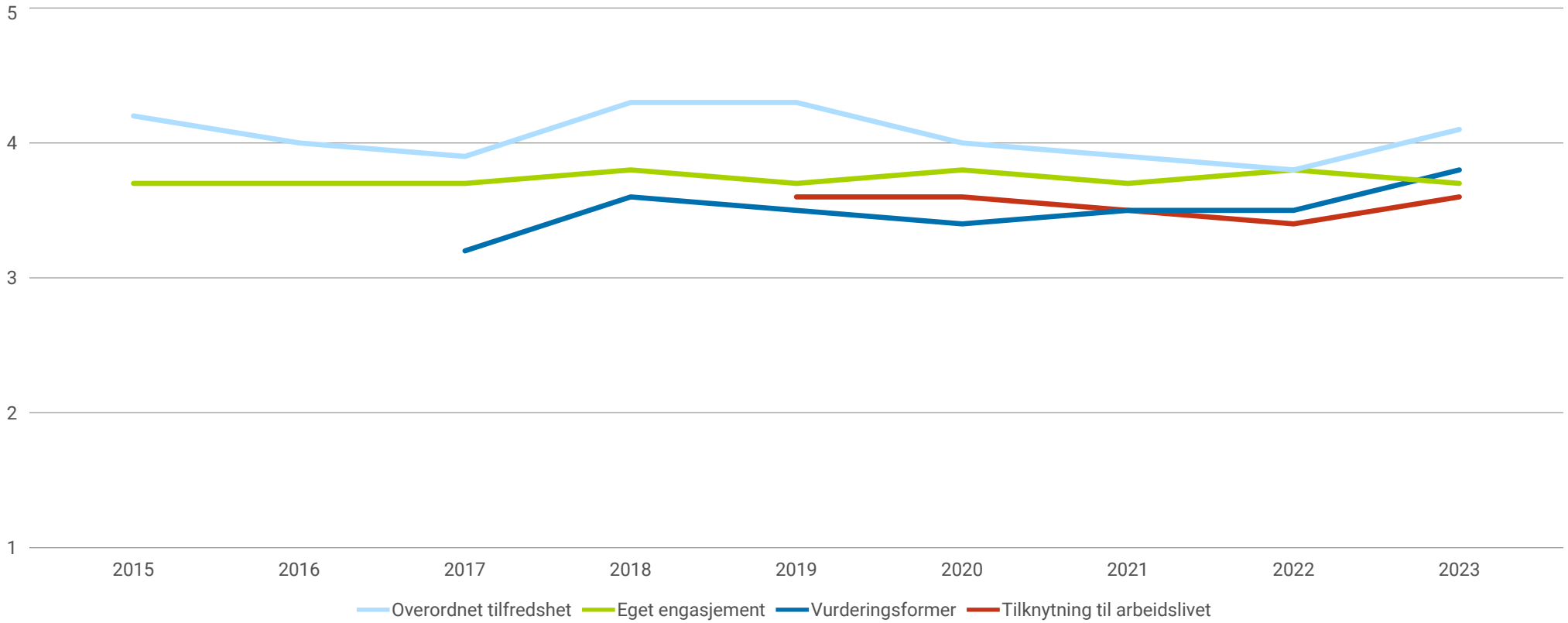
Figuren viser utvikling på hovedområder over tid. Manglende data for enkeltår skyldes at spørsmålene ikke er sammenlignbare over tid.



Dersom noen hovedområder har like resultater, kan en linje ligge skjult bak en annen.

UTVIKLING PÅ HOVEDOMRÅDER - 2

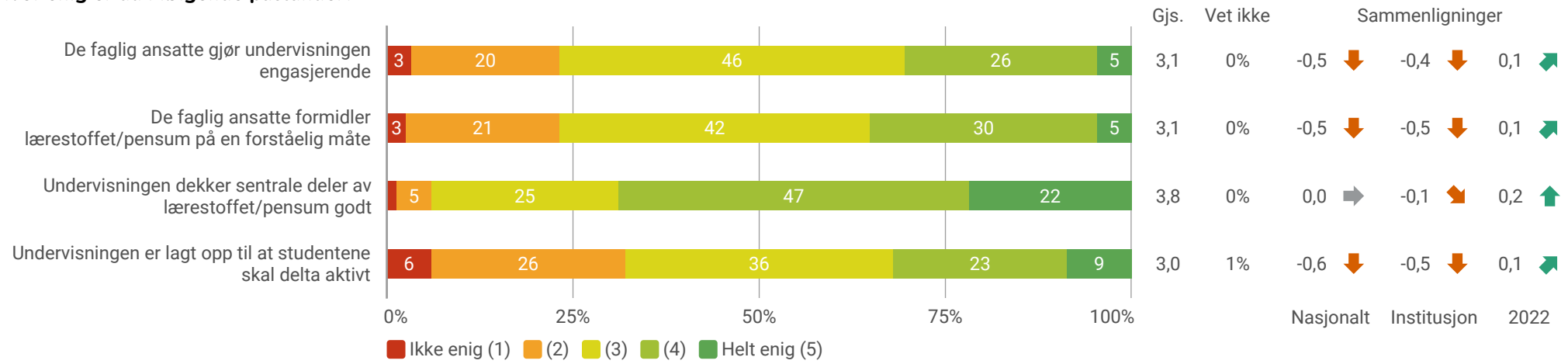
Figuren viser utvikling på hovedområder over tid. Manglende data for enkeltår skyldes at spørsmålene ikke er sammenlignbare over tid.



Dersom noen hovedområder har like resultater, kan en linje ligge skjult bak en annen.

Undervisning

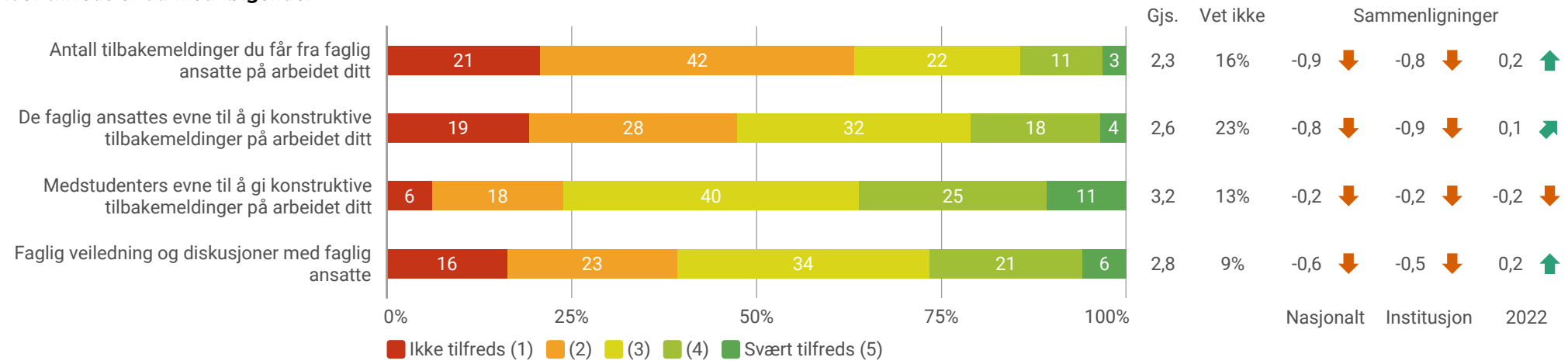
Hvor enig er du i følgende påstander?



Med «faglig ansatte» mener vi faglærere, studentassistenter, laboratorieassistenter og andre faglig ansatte som bidrar i undervisningen.

Tilbakemelding og veiledning

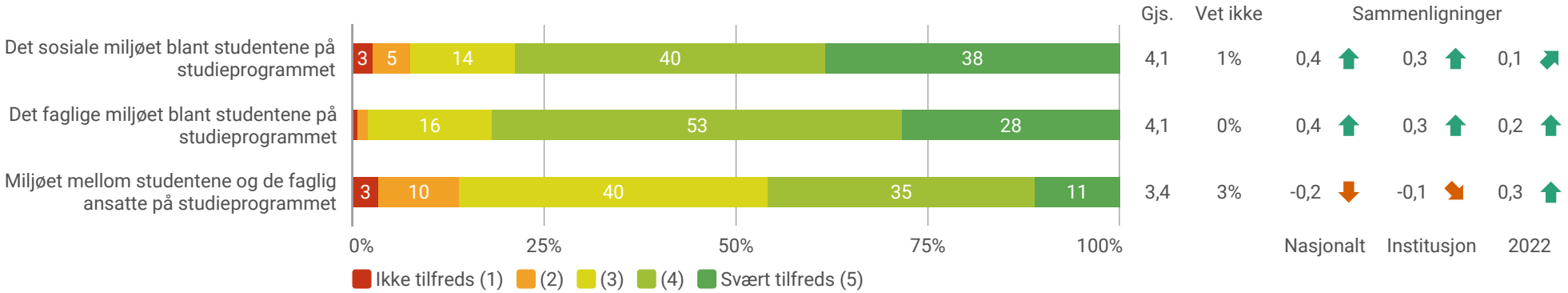
Hvor tilfreds er du med følgende:



Med «konstruktive» mener vi at tilbakemeldingene bidrar til at du kan forbedre arbeidet ditt før endelig innlevering, bidrar til at du er mer forberedt til eksamen, til at du kan forbedre læringsutbyttet ditt, etc.

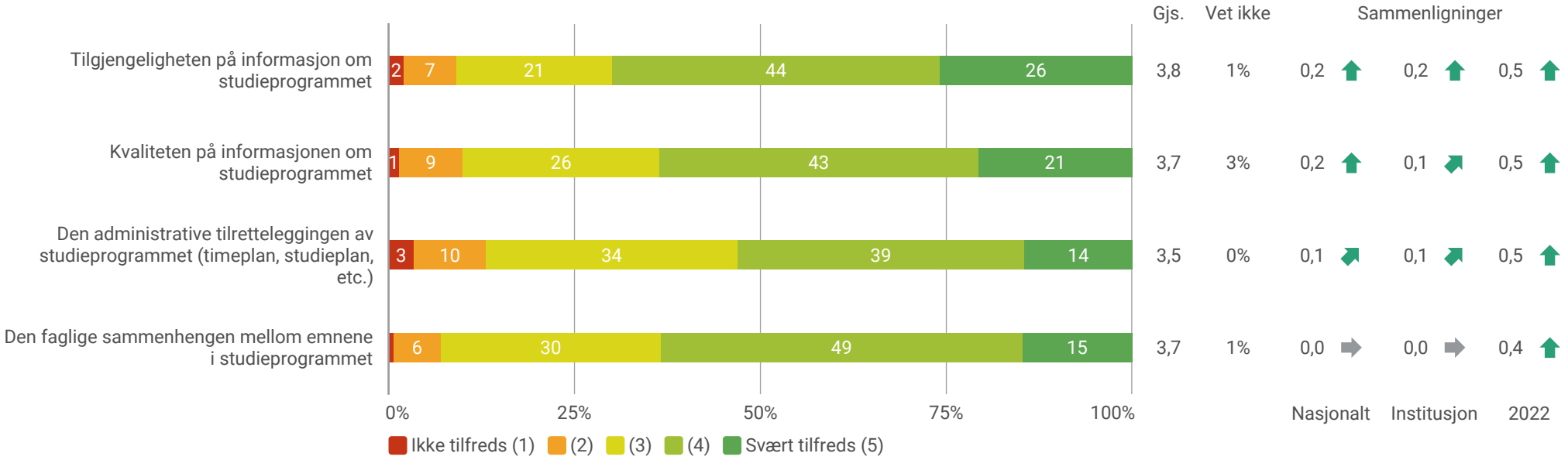
Faglig og sosialt miljø

Hvor tilfreds er du med:



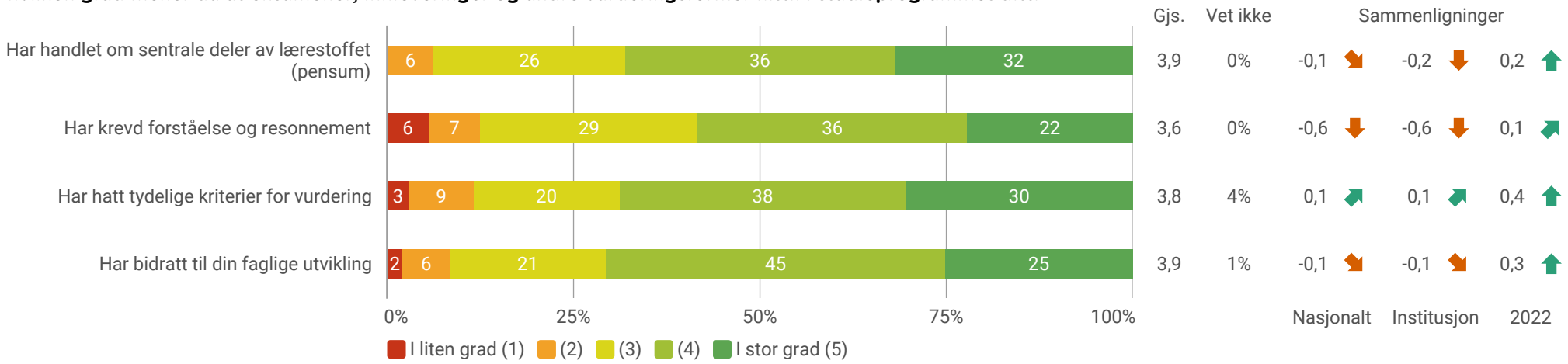
Organisering av studieprogrammet

Hvor tilfreds er du med:



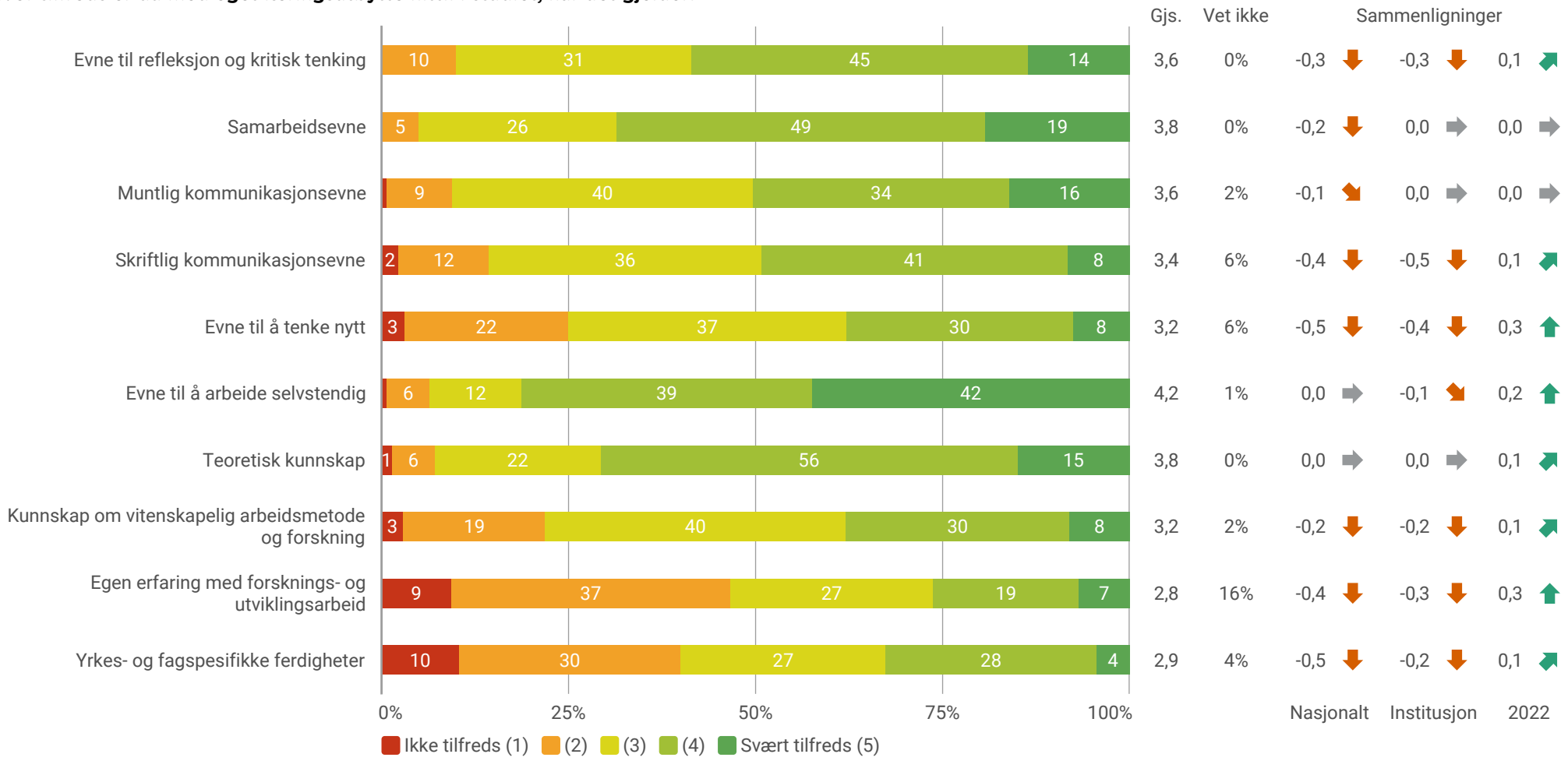
Vurderingsformer

I hvilken grad mener du at eksamener, innleveringer og andre vurderingsformer hittil i studieprogrammet ditt:



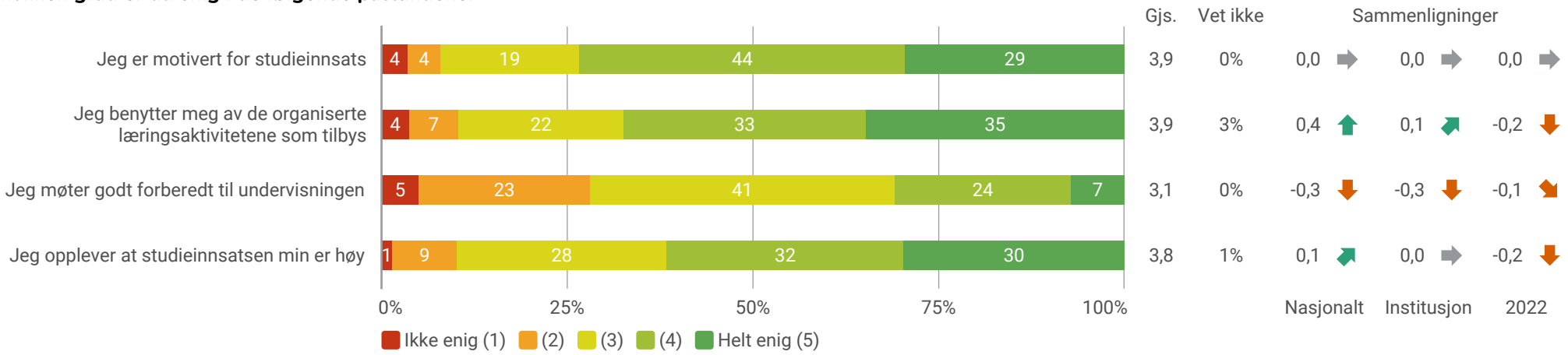
Eget læringsutbytte

Hvor tilfreds er du med eget læringsutbytte hittil i studiet, når det gjelder:



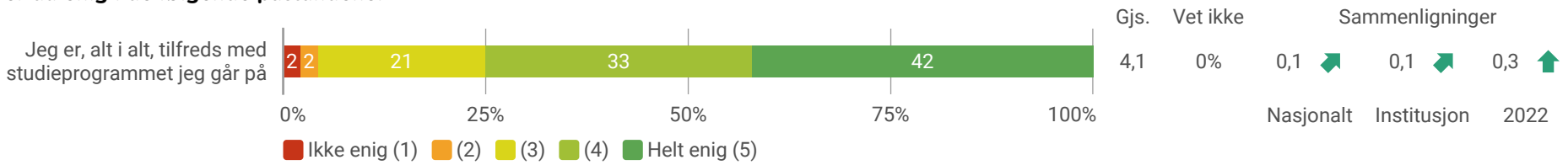
Eget engasjement

I hvilken grad er du enig i de følgende påstandene:



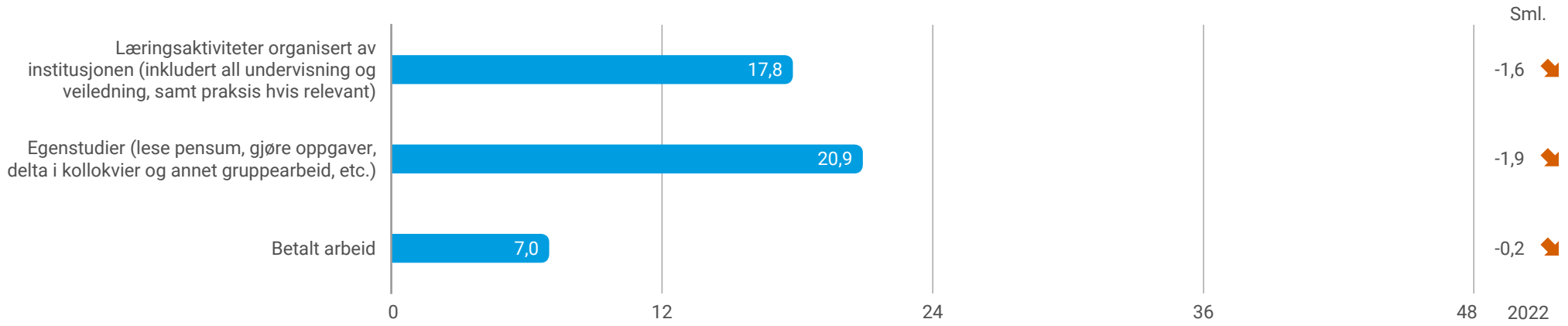
Overordnet tilfredshet

I hvilken grad er du enig i de følgende påstandene:

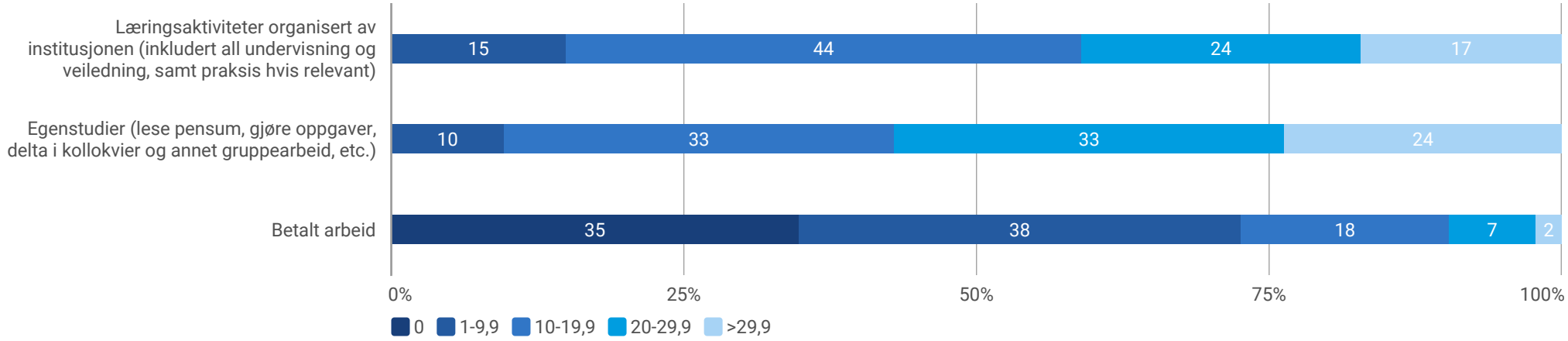


Tidsbruk på faglige aktiviteter og betalt arbeid

Anslå hvor mange timer per uke, i gjennomsnitt hittil på dette studiet (ikke medregnet ferier), du bruker på:

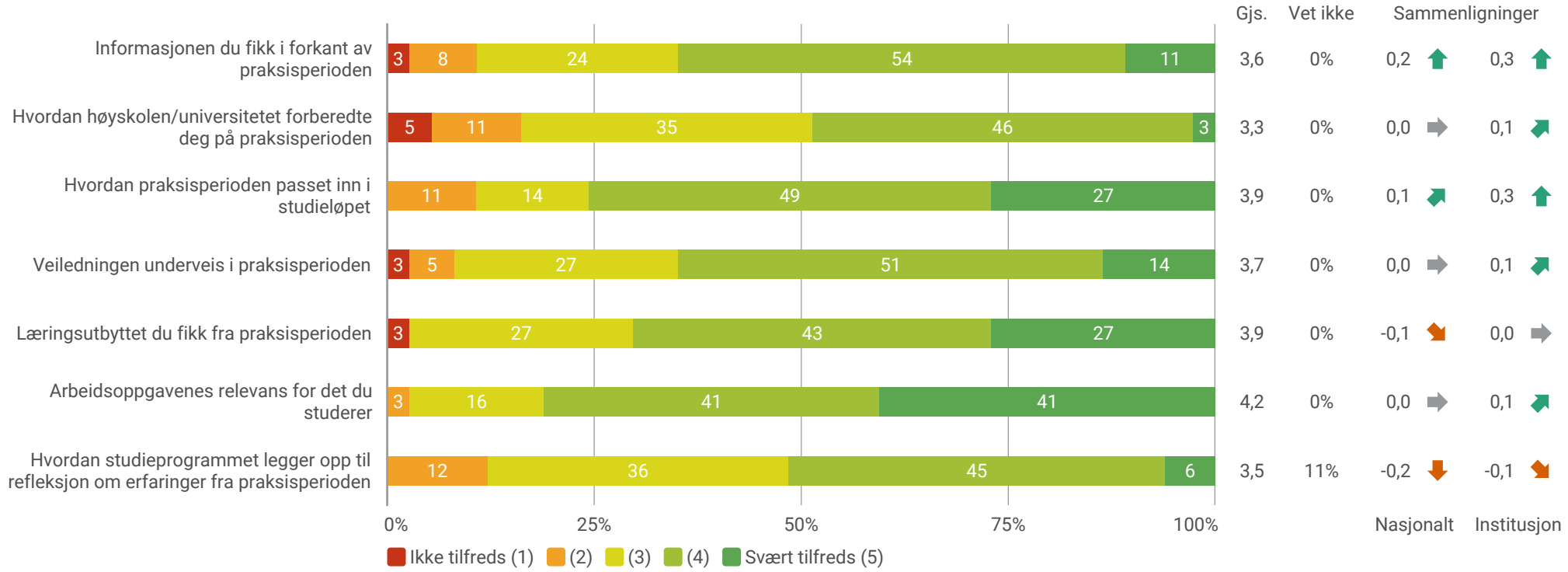


Gjennomsnittverdiene på tidsbruk angis over. Tallene er gruppert i figuren under. I spørreskjemaet var det ikke mulig å skrive inn verdier større enn 80 for faglige aktiviteter eller verdier større enn 50 for betalt arbeid. Både studenter på hel- og deltidsprogrammer inngår.



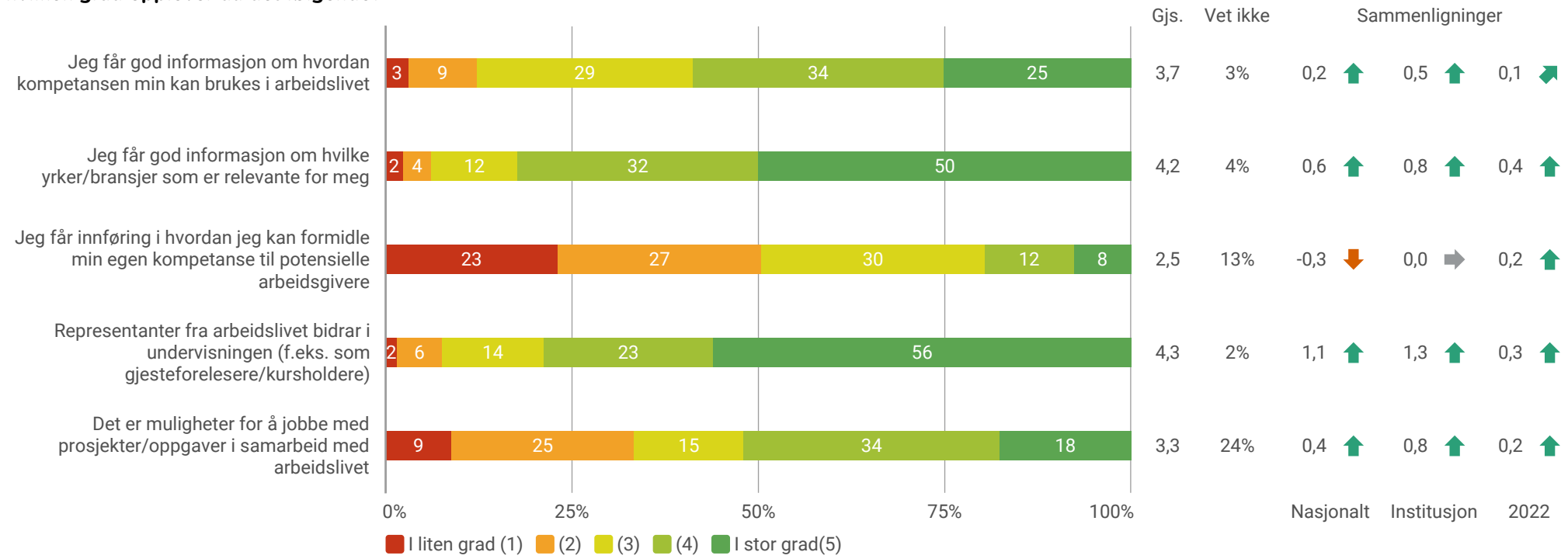
Praksis

Hvor tilfreds er du med:



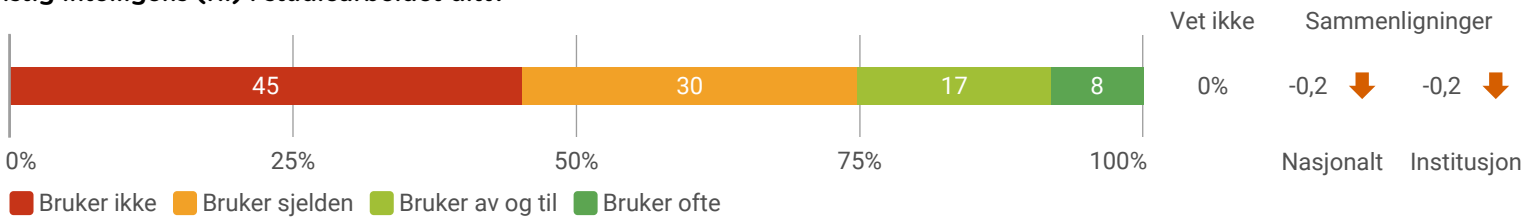
Tilknytning til arbeidslivet

I hvilken grad opplever du det følgende?



Kunstig intelligens

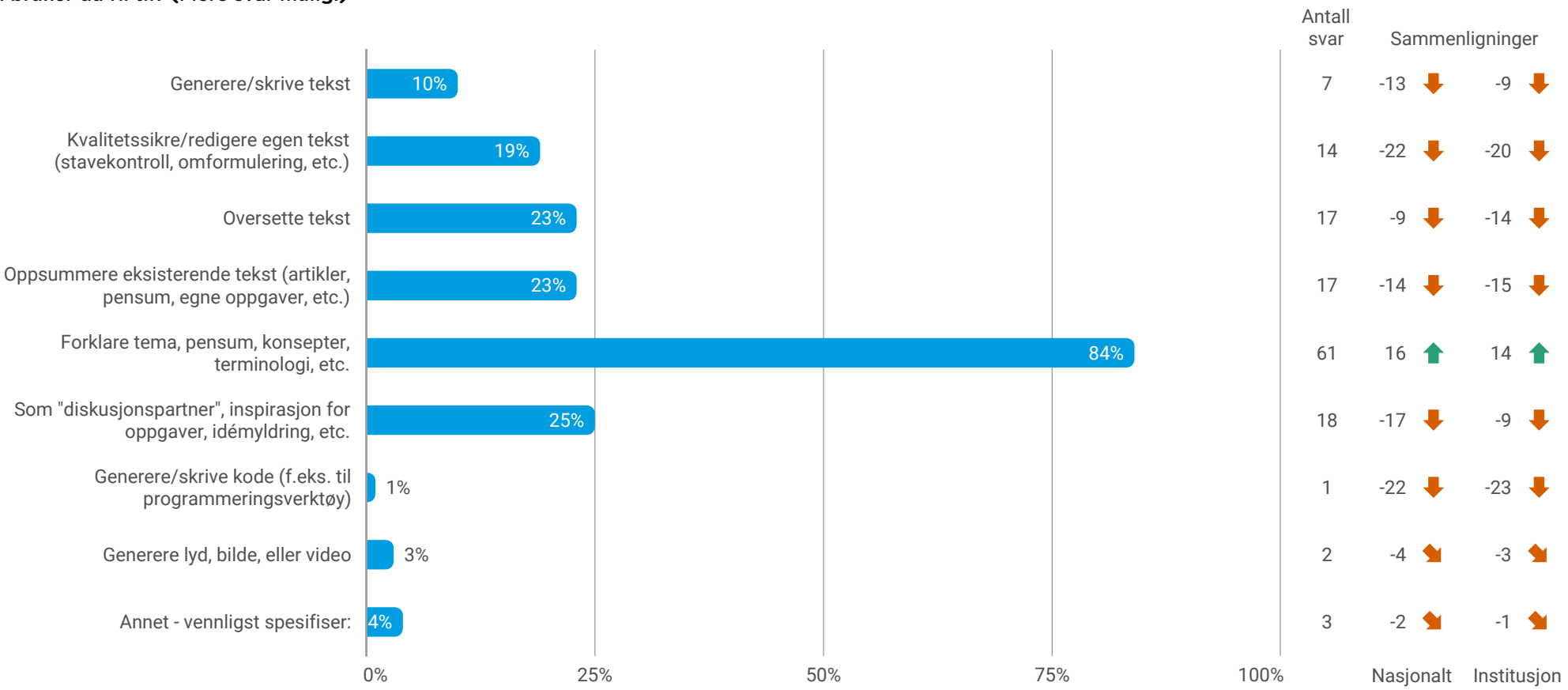
I hvilken grad har du benyttet deg av kunstig intelligens (KI) i studiearbeidet ditt?



Med «kunstig intelligens» refererer vi i denne sammenhengen mer spesifikt til det som kalles generativ kunstig intelligens (KI). Generativ kunstig intelligens er i stand til å skape nytt innhold eller bearbeide eksisterende innhold innenfor ulike medieformer. En vanlig form for generativ KI er språkmodeller (f.eks.ChatGPT, Bing), men det finnes også varianter som genererer eller bearbeider bilder (f.eks. Midjourney, Stable Diffusion), lyd (f.eks. Musenet, Magenta) eller video (f.eks. DeepDream).

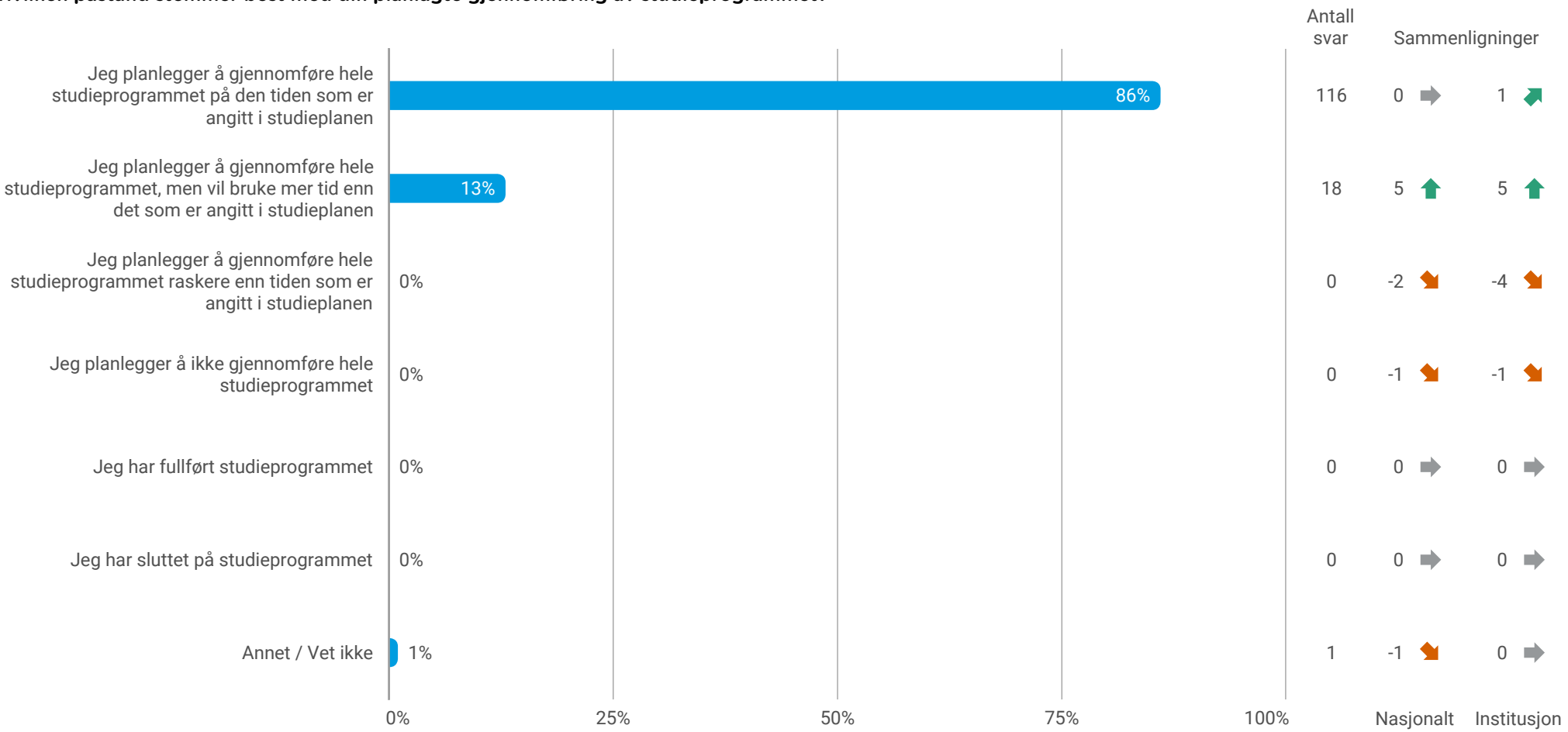
Kunstig intelligens

Hva bruker du KI til? (Flere svar mulig.)



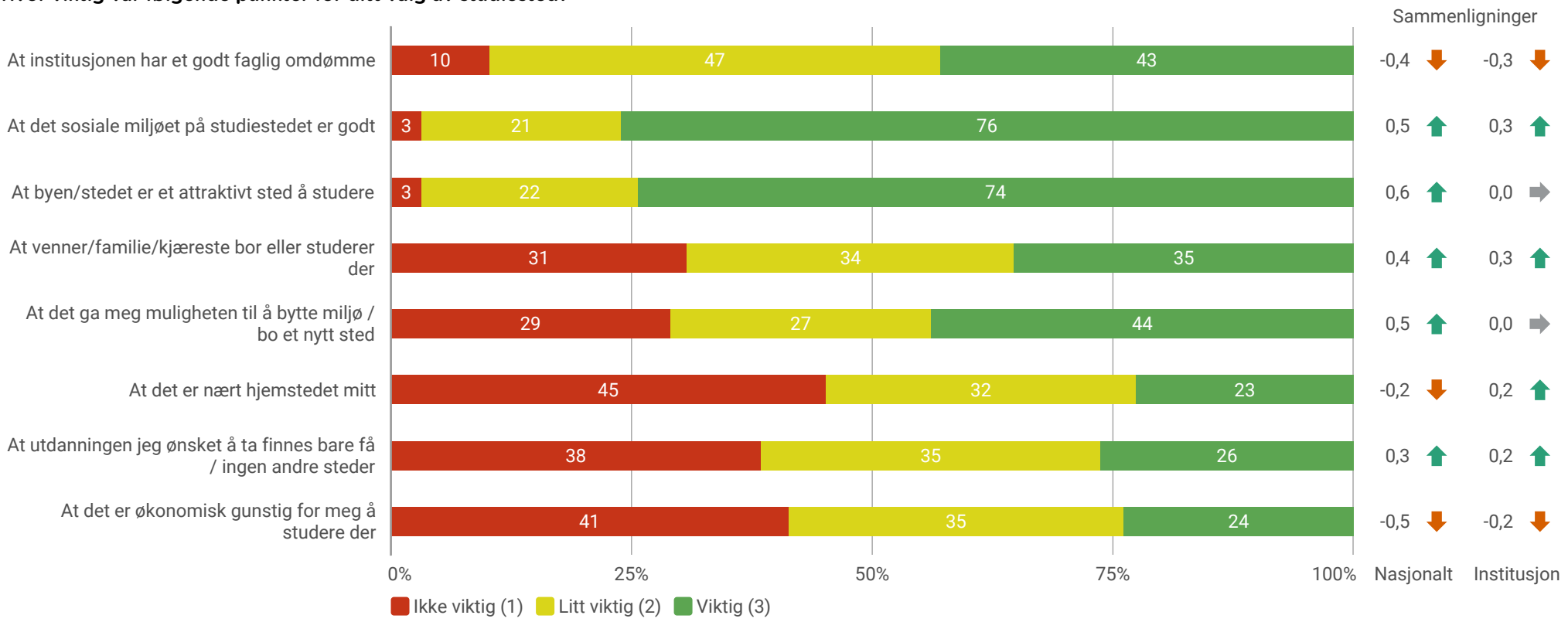
Gjennomføring av studieprogrammet

Hvilken påstand stemmer best med din planlagte gjennomføring av studieprogrammet?



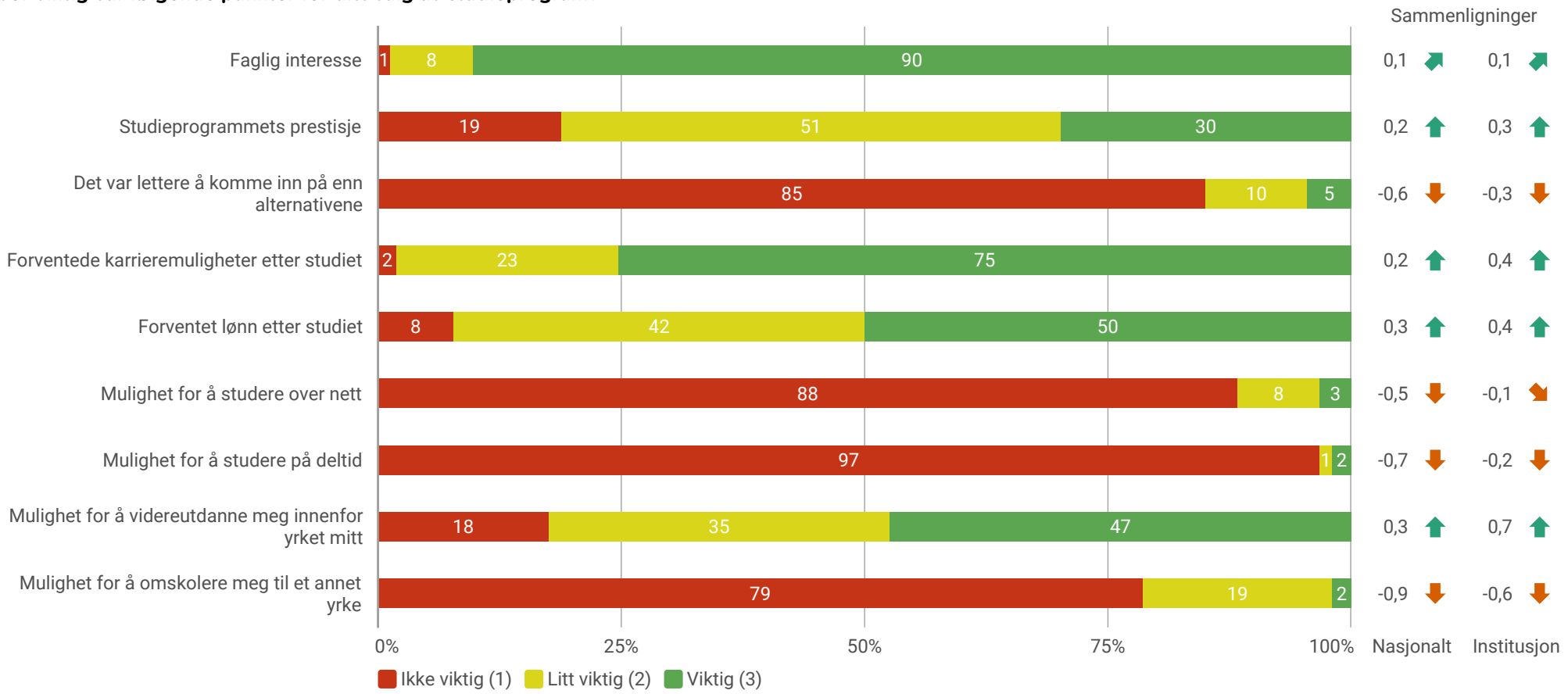
Valg av studiested

Hvor viktig var følgende punkter for ditt valg av studiested?



Valg av studieprogram

Hvor viktig var følgende punkter for ditt valg av studieprogram?



Emilie Sandve Aase
Hovedoppgave i Medisin

The Well-being of Medical students

A study of how medical school impacts the mental health of medical students at the University of Bergen

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Sammendrag

I flere tiår har forskere dokumentert at stress relatert til legeutdannelsen er et betydelig problem. Psykiske plager er vanlig blant medisinstudenter. Mange opplever høye nivåer av angst, utbrenthet, depresjon og selvmordstanker sammenliknet med den generelle befolkningen. Forskningsfunn tyder på at utbrenthet blant medisinstudenter er et globalt fenomen som ofte vedvarer i legeyrket. Studier har fastslått at medisinstudenter starter studiene sine med en robust mental helse, der de er mindre utbrent og har lik livskvalitet som ikke-medisinske studenter. Imidlertid har medisinstudenter en betydelig nedgang i fysisk, psykisk og emosjonell helse i løpet av det første studieåret på medisinstudiet. Gjennom studieårene blir mange av studentene nedbrutt, som gjør dem sårbare for utmattelse og utbrenthet, og for noen fører dette til depresjon og selvmordstanker. I denne studiens spørreundersøkelsen blant 1101 medisinstudenter i Bergen, med en svarprosent på 69.5 %, fant vi at 42 % (n = 306) av medisinstudentene ved UiB rapporterer utbrenthet, og 51% (n = 385) screener positivt for depresjon. Sammenlignet med trivselsundersøkelsen som ble gjennomført ved UiB i 2012 fant vi en nedgang i studenttilfredsheten i dagens studentmasse. Sammenlikninger av studenttilfredsheten mellom de medisinske fakultetene i Norge viser at studentene ved UiB skårer gjennomgående lavt over flere år. Vitenskapelige artikler har vist at målrettede strukturelle endringer i medisinstudiet kan redusere utbrenthet og depresjon, øke studentenes tilfredshet og ha en positiv effekt på akademiske prestasjoner. Tiltakene som er nødvendige for å oppnå slike resultater, er veldokumenterte, billige og i prinsippet enkle å innføre.

Abstract

For decades researchers have documented that the stress of medical school is a significant problem. Psychological distress is common among medical students. Many experience high levels of anxiety, burnout, depression, and suicidal ideation compared to the general population. The data indicate that burnout among medical students is a global phenomenon and often persists into practice. Research has established that medical students start their studies resilient, with less burnout rates and the same life satisfaction as non-medical students. However, they have a substantial decrease in physical, emotional, and overall health in their first year of studies. Eventually students are worn down, and become vulnerable to fatigue, and burnout, which, for some, eventually becomes depression and suicidal ideation. In this study, the questionnaire surveyed 1101 medical students in Bergen, with a response rate of 69.5 %. We found that 42 % (n = 306) of medical students at UiB reported burnout and 51% (n = 385) screen positive for depression. Compared to the wellbeing survey conducted at UiB in 2012, we found a decrease in student satisfaction in today's student body. When comparing student satisfaction at UiB to the other medical programs in Norway the findings show persistently low scores from the UiB students spanning many years. Several academic papers have shown that targeted structural changes to medical programs can lower burnout- and depression-rates and create better students' satisfaction with positive effect on academic performance. The initiatives which are necessary to achieve such results are well documented, easily implemented and, in principle, practically inexpensive.

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Introduction

In the spring of 2012, the medical student council at the University in Bergen (UiB) conducted a survey (WB12) of the well-being of the students in their medical program. The results reflected a struggling student body in which a majority agreed on several problematic experiences. In 2015 the UiB medical faculty introduced a reformed medical program with the intent of improving and modernizing. As a current 5th year medical student at UiB I designed the present study to examine the documentation on psychological distress among medical students. Based on my own experience of deteriorating mental health during medical school, as well as a perceived high prevalence of similar tribulations through interaction with my peers. I designed a questionnaire based on the 2012 report, to chart the current state of the medical students at UiB and examine the development of their well-being over the past 11 years, after the publication of the first well-being report and following the introduction of the MED2015 curriculum. Additionally, I use national data from the annual Studentbarometeret to examine how reported student well-being at UiB compares to the other medical faculties of Norway. The following includes a non-systematic literature review of academic research on the global negative trends of medical student mental health.

Medical student distress has been a globally persisting challenge researched for decades,[1] in multiple nations.[2] Psychological distress manifests in a variety of ways including burnout, depression, stress, fatigue, and low mental and physical quality of life. A study found that more than 80 % of medical students were experiencing at least one of these manifestations of distress with 58 % having three or more forms of distress.[3] Most often the distress experienced was burnout, fatigue, and stress. The study also found that the higher the number of distresses a student experienced the greater the risk for thoughts of dropping out and suicidal ideation. One multi-institutional study on US medical schools estimated that at least half of all their medical students may be affected by burnout during their medical education.[4] Some studies show a burnout range between 45-71 percent, with the possibility for even higher rates, as research suggests that students who experience burnout are less likely to respond to the digital questionnaires.[4] Burned-out students will often develop other comorbid mental health conditions as a consequence of their burnout,[5] and have more often symptoms of depression and higher levels of fatigue than nonmedical students.[6,7] Distress peaks during clinical training, but burnout, depressive symptoms, and recent suicidal ideation are more prevalent during all stages of medical education and through medical practice compared to the equivalent general US population.[7] Research shows that burnout, depression,

and suicidal ideation is not a predisposition among most medical students, but rather the result of an insufficient and destructive learning environment.[2,6,8,9,10] Research has examined medical students' initial levels for depression and anxiety during the introduction weeks of the educational program. They found that early first year medical students had fewer depressive symptoms, lower rates of burnout (27 % vs 37 %) and scored higher on the quality-of-life scale than similarly aged college graduates.[6] However, student health would rapidly decline during their first year in the medical program. Physical health declined less than emotional health, while perceived stress levels did not change over time but remained moderately high throughout the entire curriculum.[10] The medical students did not again reach the baseline levels from before medical school nor match the levels experienced by nonmedical peers.[10] Research on Norwegian medical students show similar findings. Upon entering medical school, medical students had the same level of life satisfaction as university students of the same age but experienced a significant reduction in life satisfaction from baseline to the middle year. Satisfaction persisted at the lowest level for the remaining three years of medical education, and life satisfaction in final year medical students were significantly lower than non-medical students in their final year of university.[8] The risk for burnout and associated suicidal ideation for medical students, and physicians, is mainly short-term and reversible when removed from the triggering environment.[11] Several studies suggest that medical students carry with them their psychological distress into the role of physician,[2,12] contributing to the high levels of depression, burnout, and suicidal ideation also among physicians.

In the following research findings on depression, suicidal ideation, and burnout among medical students and physicians are presented.

Depression and suicidal ideation

Medical students consistently demonstrate depression rates that are significantly higher, compared to the same age cohort, in the general population and non-medical students.[10,13] A comparative study found that the overall prevalence of depression or depressive symptoms among medical students range from 9 % to 55 %, averaging about 27 %, between 2 and 5 times higher than the general population.[13] Studies suggest that medical students are particularly at risk for psychiatric distress during their educational program, in which the prolongation of high stress is the key component. Although other students face similar problems, they do so to a lesser extent and for fewer years.[14] A United Kingdom study on medical students found that the incidence of depression and anxiety doubled during the first

year of medical school, from 25 % to 52 %, and that one third of the students had poor mental health.[15] Depression is a prevalent issue present during all levels of medical training, as both medical students and physicians are more likely to screen positive for depression and have higher levels of fatigue.[7] This impacts the long-term health of physicians and the quality of care delivered in medical facilities. The development of depression and suicidal ideation has been linked to an increased short-term risk of suicide as well as a higher long-term risk of depressive episodes and morbidity.[13] Research has found that doctors in practice are poor at calibrating their own level of distress, and both medical students and doctors are reluctant to seek help. Medical students are less willing to seek professional help for a serious emotional problem than both the general US population and age-matched peers.[2]

Research has found a strong association between burnout and suicidal ideation.[1,11] Students who experienced burnout were 2-3 times more likely to have thoughts of suicide, and students who recently developed burnout were as likely as students with chronic burnout to report suicidal ideation.[11] Research has shown that suicidal ideation is reversable in burned-out medical students when the individual recovers from the state of burnout, showing the same rate of suicidal ideation as the students who had never experienced burnout.[11] Several multi-institutional studies found suicidal ideation among medical students to be around 11 %,[11,13] which is twice as high as in persons of similar age in the general public,[11] and 3-4 times higher in female medical students than in women in the general population.[15] Norway is no exception as data showed a 14 % prevalence in recently graduated doctors.[11] Suicidal ideation among medical students may range from 7 % to as much as 24 %.[13] As medical students progress in their medical career the risk of suicidal ideation does not deplete as students become physicians. As many as 400 US physicians take their own life every year,[16] which amounts to about one physician every day.[17] Compared to the suicide rate in the public a male physician has a 40 % higher suicide rate than the men in the general public, whereas female physicians have 130 % suicide rate higher than women in the general population.[11] Doctors have lower mortality rates for all other causes of death compared to the general population. It is only death by suicide that stands out negatively.[17] Physicians have the highest risk of suicide of all occupational groups, including others who are highly educated, and higher even than those who are unemployed.[17]

Burnout

The concept of burnout is used frequently in the literature; however, it often remains unclear and difficult to define burnout despite being referenced on a regular basis.[5] Maslach and

colleagues defined burnout as chronic stress associated with emotionally intense work demands for which resources are inadequate.[18] The National Academy of Medicine defines burnout as a syndrome characterized by a high degree of *emotional exhaustion*, *depersonalization*, and a *low sense of personal accomplishments.*[19]

1. Depersonalization is a distant or indifferent attitude towards work, and manifests as callous and cynical behaviors.[20]
2. Emotional exhaustion is the physical and emotional symptoms of chronic stress and correlates very highly with depressive symptoms[21]. It includes emotional fatigue and mood swings, feeling detached, irritability, anxiety, apathy, and inability to feel happiness and joy.[22] As well as cognitive impairment including brain fog, forgetfulness, fleeting concentration, and physical symptoms such as sleep difficulties, changes in appetite, headaches, and stomach and digestive problems.[23]
3. A sense of low personal accomplishment is poor professional self-esteem and includes reduced effectiveness and loss of work fulfillment.[20,16,18]

The experience of burnout may not include all these symptoms in one individual nor does an individual who is burned-out experience all these domains. A multi-institutional study found that 26-38 % of medical students had high **depersonalization**, 35-45 % had high **emotional exhaustion**. 45-56 % had symptoms suggestive of **overall burnout**.[2] Burnout is distinct from related constructs such as fatigue, job dissatisfaction, and depression. Although burnout correlates with these problems, it may be absent in their presence or present in their absence. As a work-related phenomenon and a result of chronic stress, burnout is further distinguished from depression. While having major personal consequences outside the workplace distinguishes burnout from simple job dissatisfaction.[18]

Burnout is common among medical professionals,[15] almost 1 in 2 US physicians has symptoms of burnout,[9] nearly twice that of the general population.[24] Physician burnout may have serious implications for the affected person,[20,25] the health institution, and the patients.[2,18,20,24] Research shows that groundwork for the physician burnout is established in the medical student at medical school,[12] and residency program directors are likely to inherit medical school graduates with a substantial burden of burnout symptoms.[2] Crucial for student burnout is the learning environment.[26] Specifically, dissatisfaction with the overall learning environment and lack of support from faculty relate strongly to burnout among first- and second year students.[2] Several factors, contributed to the development of burnout among medical students, including academic pressure, excessive workload, absences of autonomy, insufficient work-life balance, financial concerns, sleep deprivation, exposure to patients

suffering and death, student abuse, and a hidden curriculum of cynicism.[25,18] Burnout in turn increases the likelihood of poor academic performance, academic dishonesty, cynicism, substance abuse, thoughts of dropping out of school, and suicidal ideation.[2,4,8,11,18] It is an insidious threat to medical students' professional development and diminishes professional qualities such as honesty, integrity, and self-regulation.[2] In the clinical setting, burnout among medical students is associated with self-reported unprofessional conduct, lower empathy scores and less altruistic professional values.[2,6] Students with burnout were more likely to falsely report a laboratory test as pending and/or report a physical examination finding as normal without having performed the examination.[2] Although one of the most common reasons reported for choosing a career in medicine is "an interest in helping people", this idealism often gives way to cynicism during medical school.[15] Empathy correlates with physician competency, but the medical school training process is frequently characterized by a decline in empathy and humanitarianism, even as medical educators strive to promote such characteristics.[15] Cynicism is a coping mechanism with the intent to buffer against anxiety, fear of failure, and exposure to human suffering. However effective in the short term, such mechanisms ultimately erode professionalism.[15]

Presented in the following is a psychological theory that may shed light on the mechanisms causing poor mental health in medical students and physicians.

Self-Determination Theory

The self-determination theory (SDT) is a theory of human motivation, which is either intrinsic or extrinsic. Extrinsic motivation stems from external factors which influence our behavior, such as reward systems, grades, evaluation, and the social opinion of others.[27] Intrinsic motivation comes from within and is not based on external consequences. When intrinsically motivated, one engages in an activity out of interest or inherent satisfaction, curiosity, and enjoyment.[27] The best learning outcomes result from intrinsic motivation, which fosters determination and engagement, enhances performance, persistence, creativity, and well-being. Learning environments which promote high intrinsic motivation and autonomous forms of self-regulation are associated with better learning, conceptual understanding, academic performance, and academic achievement.[27] Intrinsic motivations are positively related to well-being indicators such as self-esteem and self-actualization, while also having a protective effect against developing depression and anxiety. In contrast, external motivations have the opposite effect.[28] While external rewards may prompt people to modify behavior, as long as the behavior is not internalized, the modified behavior will

regress or fall below its initial level when the rewards are removed, making external motivations only effective as short-term solutions.[27]

The Self-determination theory is based on data which suggest that human beings have a fundamental need for self-development and growth. Institutions do not need to create motivation, rather they have a responsibility to create opportunity for individuals to nourish their own intrinsic motivation autonomously.[27] Maintaining and strengthening intrinsic motivation and autonomous self-regulations is dependent on three conditions: ***autonomy, competence, and relatedness***. *Autonomy* is described as freely pursuing the goals that you choose and conveys a sense of self-governance or self-determination. *Competence* is a desire to feel effective in actions one peruses and performs.[27] Feedback is crucial for the individual to connect with the sense of competence, which then leads people to seek challenges that are optimal for their capacities and to persistently attempt to maintain and enhance skill and capabilities. *Relatedness* refers to the desire to feel connected with others, to care and be cared for, listened to, and to have a sense of belonging, both with individuals and community. The presence of autonomy, competence, and relatedness reduces burnout and promotes well-being.[27]

There is a need for understanding how medical education can do better to help students become capable doctors who also thrive while becoming and being physicians. Presented in the following are examples of successful change, with the purpose of improving medical student satisfaction and mental health.

Medical educational programs which made a positive change

In 2008 the St. Louis University school of medicine (SLU) documented high levels of burnout, depression, and anxiety among their medical students. Students at SLU identified the volume and detail of the curriculum, as well as competition for grades, as the biggest stressors in the first two years of the study program.[12] The faculty decided to make changes to the educational environment with the goal of creating a learning environment that would allow students to focus on their own health while learning how to attend to the health of others. The faculty prioritized implementing initiatives to increase the students' wellbeing, with profound effects from 2011 to 2018. Depression decreased from 27 % (2011) to 4 % (2018), and anxiety from 56 % (2011) to 14 % (2018). Students reported getting more sleep and spending less time on studies than the national average, and, during this time, the academic performance of these student classes improved.[29] Previous research has shown that students with burnout score significantly lower on the national standardized examination.[2]

SLU students reported the new program as effective in allowing a balanced lifestyle, stress management and overall well-being, scoring **81 %** on student satisfaction, versus the national average score of 33 %.[30] Over 10 years, the new program at SLU saw an 85 % reduction in depression rates and a 75 % lowered anxiety rates among first-year medical students.[30]

The main champion for the initiative changes at SLU was dean Stuart Slavin, who has written several academic papers on the curriculum changes implemented at SLU. He argues that well-being cannot be forced, institutions have to make environmental changes and then well-being will ensue. "*We provided our students with a supportive, responsive, respectful, and caring learning environment, and they flourished*".[30] Slavin argues that approaches to medical student mental health have previously been mostly reactive, implementing wellness programs which focus on improving access to mental health care, educating students about mental health problems, and reducing the stigma related to seeking mental health treatment. In addition to putting the responsibility of students' mental health on the individual it is also a strategy of symptom relief rather than treating the source of origin.[12] Providing training regarding how to deal with work-related stress in the absence of a simultaneous effort to identify and address factors contributing to said stress inevitably generates burnout and cynicism. By contrast, a cohesive and simultaneous effort that pairs such training with structural changes demonstrates a shared commitment to addressing the issue and increases community affinity.[2]

The SLU initiatives changed the learning environment by making changes to course content, contact hours, scheduling, grading, electives, learning communities, and compulsory resilience/mindfulness exercises. They changed into a pass/fail grading system and reduced unnecessary detail by reducing scheduled instruction and lessons by 10 %. Specific faculty development sessions were offered, assisting course directors in further reducing detail, targeting the development of longitudinal electives, and identifying faculty mentors who had objectives of creating more opportunities for students to find meaning in their work. They supported medical students' mental health by implementing a mandatory resilience program, targeting maladaptive coping mechanisms, maladaptive perfectionism, and other destructive mind-sets. In addition, they created a mandatory mindfulness program which was introduced to new medical students and repeated for senior students during key transition points in the academic program.[12] "*We recognized early on that our students suffered from information overload, excessive class time, and unreasonable academic demands, so we reduced that load and the pressure on our students. In backing off, academic outcomes did not suffer, but rather they improved, as did the mental health of our students*".[30] The new program

demanded little financial resources. The annual budget for the entire initiative was less than $3000 (24,420NOK). No new staff were added. The initiatives mostly included a change in perspective and attitude.[30]

The key element for the restructuring of the medical program at SLU was to view the problematic experience of medical students as a *person-in-context challenge* rather than seeing distress as an *inevitable by-product* of the medical school experience. The change encouraged both faculty and students to care more about learning, experiencing, and growth and less about test scores. The author expresses the necessity for understanding the lived experience of students and not making assumptions about what they needed, thus treating the students with respect and compassion rather than trying to keep students in line through forced authority. It was essential to include the students in the planning of the changes and initiatives.[12.30] The faculty's prioritization of environmental changes was an indisputable key to success to student well-being and mental health as well as creating a spirit of collaboration, innovation, and joy.[30] The positive results from SLU were however not reflected in the students who were doing their clinical rotations. These students experienced a completely different learning environment and were met by unhappy residents and faculty.[30] This suggests that problems associated with the traditional culture for medical learning is represented also in the clinical practice of medicine.[30]

Efforts to change the traditional learning environment which causes unusually high rates of students' distress is not unique to the SLU medical program. At the Humboldt University of Berlin there is a traditional track (TT) and reformed track (RT). The TT is based on lectures and seminars, courses are organized by individual disciplines, and course assessment depends on individual teachers and includes multiple choice questions (MCQ) exams.[31] The RT runs parallel to the traditional track, with a smaller number of students, who are randomly selected from a large application list. Teaching and learning on the reformed track are problem-based, focused on self-directed learning in small groups, and supplemented by seminars and tutorials. This includes substantial time allocated for self-study and a significant decrease of pre-structured teaching. The emphasis is on interdisciplinary teaching and early contact with patients, as well as introductory seminars on clinical and communication skills.[31] Assessment includes both MCQs and objective structured clinical examinations (OSCEs), and students must pass the same state examinations as students on the traditional track.[31] Kiessling et al. (2004) discovered that the RT students found the program less demanding, with more room for personal time, less competitive and predetermined, and with higher course quality. The students on the RT felt more supported than students on TT.

The quality of courses on the RT was judged to be higher and RT students reported having better contact with their teachers. Students' expectations were better fulfilled, and it was easier for them to see meaning in their studies and to speak up in classes.[31] There were no significant differences between the two cohorts regarding the acquisition of knowledge as tested in the state examination.[32]

Research on the subject presents findings of extensive psychological distress among medical students. Patterns which are present in many medical programs universally. However, there are examples of medical schools outside the norm who do not exhibit elevated levels of psychological distress among their medical students. This thesis aims to examine the well-being among medical students in Bergen using collected quantitative and qualitative data. Focusing on the elements of burnout, depression, quality of life, perceived exam stress, perceived lecture quality, and the SDT components of autonomy, competence, and relatedness.

Method

Design of Survey

The study is a mixed method study, which contains a literature review on psychological distress among medical students. PubMed was used and predominately searched for "medical student", "burnout", "depression", and "solutions". The study also contains a questionnaire with quantitative and qualitative items, where both numeric and textual data are predominantly used for qualitative analyses. The questionnaire survey distributed to the UiB medical students are referred to as the Well-Being study of 2023 (**WB23**). The survey was mainly based on validated questionnaires identified in the research literature. For areas of interest in which no established questionnaire was identified, questions were created by the candidate and supervisors based on academic literature. This includes questions concerning burnout symptoms (table 2d) and the self-determination theory (table 5). In the following, the different instruments and items of the questionnaire are described in detail.

Burnout

The current standard for burnout assessment is the Maslach Burnout inventory (MBI) consisting of 22 items on a 7-point scale. However, a study done by West et al. (2009) found that answering one of the 2 upper confirming statements on the 7-point scale one two single-item questions gave a 90-95 % likelihood of receiving a high-level burnout score after taking

the full MBI questionnaire. The two questions "I feel burned out from my work", representing the emotional exhaustion (EE) domain of the questionnaire, and "I have become more callous toward people since I took this job", representing the depersonalization (DP) domain of the questionnaire, were reliable indicators for the likelihood of having a high average burnout in each domain on the MBI questionnaire.[33]

The aim of the well-being survey 2023 was to get a general estimate of the medical students' tendencies to experience burnout and thus these two items are adequate and preferable to the entirety of the MBI questionnaire. The word "job" was switched to "study program" and the question was set to a 5-point scale to be uniform in the WB23.

In addition to these MBI based items on burnout, the WB23 entailed questions concerning risk factors associated with burnout and a symptom list with common symptoms of emotional exhaustion mentioned in several burnout studies. The survey asked participants to mark symptoms they had experienced in a period spanning two weeks or more in the time before they started medical school and during their time as students in the UiB medical school program.

Depression

A study done by Whooley et al. (1997) found that a case-finding instrument consisting of the two questions "During the past month, have you often been bothered by feeling down, depressed, or hopeless?" and "During the past month, have you often been bothered by little interest or pleasure in doing things?" answered in a Yes/no fashion, was reasonably accurate in determining depression among individuals.[34] The study compared the two-question instrument with six common case-finding instruments and compared their findings with structural interviews performed by physicians. The authors conclude that this two-question instrument has a fair predictive value (33 %) for identifying subjects with major depression and especially a negative response to both questions make depression highly unlikely (negative predictive value 98 %). Scoring yes on both or one of these questions would be considered a positive test, and the person should be referred for further examination.[34]

Quality of life (QOL)

Several studies have assessed the use of a single-item numerical linear analogue self-assessment scale (LASA) when determining subjects' overall current quality of life. The scale has been used to study physicians and medical students but is most often used to assess cancer patients' QOL during cancer treatment.[35] One study concluded that the single-item

LASA instrument was the most useful when assessing the global impression of quality of life within a group.[36] For the WB23 study the question used was "Your overall mental, physical and emotional quality of life over the past month?" Rated from 1 to 10.

On this scale, health volunteers have been found to score 8 or more, with only 2 % scoring 5 or lower. Giving a 5 or lower is defined as a clinically meaningful deficit (CMD) and constitutes the need for immediate intervention.[35] In cancer patients, 17 % had CMDs, with an average of 7,3. A surprising finding was that health care professionals scored on a level with and below cancer patients. Physicians scored a 7.3 average (CMD 13 %), Minnesota medical students scored 7.2 (CMD 15 %), while residents averaged as low as 6.5 (CMD 28 %).[35]

Self-determination theory & perceived exam stress

The questionnaire items intended to measure the components of the Self-determination theory including autonomy, competence, and relatedness were not extracted from scientifically validated instruments. The questions (table 5) were designed for the WB23 survey specifically with inspiration drawn from the "The self-determination scale (SDS)" and "the learning climate questionnaire".

Most assessment for medical school programs of Norway mainly consist of written exams, predominantly MCQ.[37] The questions for perceived exam stress (table 7) were phrased with this in mind. The same questions were also used to determine perceived exam stress in the longitudinal study concerning change in medical school students' well-being over 20 years.[1]

Data collection

All medical students at UiB were invited to participate in the survey in the spring 2023 (N=1101). Participation was voluntary, and responses were anonymized. Most data collection occurred through in-person invitation during start or finish of lectures, where lecturers allowed five minutes for students to complete a questionnaire distributed by electronic link. The survey contained demographic questions (e.g. gender, age, class) as well as 30 questions concerning their experience and life as a medical student. In the afternoon of the same day as the in-lecture survey, students received another invitation to share written comments about specific situations or experiences on the same survey questions as they had received earlier that day. This second invitation also contained a link to the original survey for students who were not in class that day or who had for other reasons not yet been able to complete the survey. The only exception to this method was the class of 19A, which was unavailable due

to a large clinical rotation spanning 8 weeks. Instead of an in-person invitation they received the electronic link through a class announcement and were given time during one of their lecture breaks to complete the survey. They also received an electronic invitation to both the quantitively and qualitative survey later the same day. This class still had the lowest participation rate by far. All classes also received a second invitation to complete the surveys in the summer a few days after their final examinations for the semester.

Prior to collecting the data from the student population, the survey was tested through a small pilot study. Two students from class 18B took the study to confirm comprehension. Their suggestions for improvements were considered and acted upon before the survey was distributed to the remaining student classes.

Data analysis

Analyses on the demographics of class year, gender, and age were performed. However, in the categories of class year and age only minor differences were detected, and such analyses are not included in the results. There were notable differences between the genders which are referenced in the results.

Ethical considerations

No personally identifiable data was collected, meaning that the study was exempt from ethical approval.

Results

Of the 1101 medical students registered in spring of 2023 at UiB 765 (69.5 %) responded. Of the questionnaires, 737 were fully completed and 60 partially completed. Partially completed questionnaires with only demographic information (N=32) were removed, while 28 partially completed questionnaires ranging from having answered only one opinion question to having answered all but the last question was included, constituting 3.7 % of the material. Written comments were offered by 33 students, resulting in about 190 comments. A selection of these comments is listed in the appendix, and a few are offered throughout the discussion, to illustrate the numeric findings.

Most items in the WB23 questionnaire had answers ranging from 1 (disagree) to 5 (agree) on a Likert scale. Students scoring 1 or 2 were grouped in the category “disagree”, and those scoring 4 or 5 were grouped as “agree”. A score of 3 is not necessarily neutral but

signals a weaker tendency to agree or disagree. In some of the results presented below, it was deemed reasonable to group students replying 3, 4 and 5 in a common category labelled “did not oppose”.

The demographics of the study consisted of three components: Class year, age, and gender. At UiB the classes are split in two after the 3rd academic year. Therefore, naturally, the younger classes are about double the number of the post-split classes. The only outlier in these class demographics is the class of 19A, for reasons explained above.

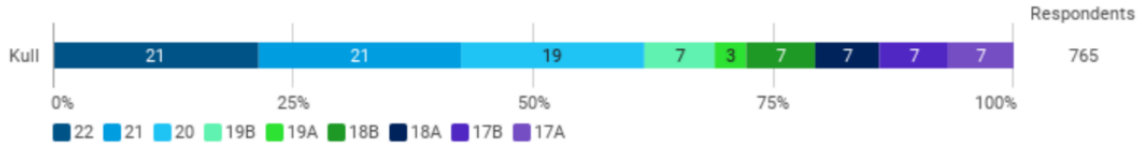


Figure 1: Class year distribution

Remaining demographics show a majority of women and people in their early- to mid-20s.

Table 1a: Gender distribution

Women	(561)	73.3%
Men	(204)	26.7%

Table 1b: Age distribution

≥ 30	4 %
27-29	12 %
24-26	35 %
21-23	36 %
≤ 20	13 %

Women were more likely to report spending most of their time on their studies and feeling they had little time/energy for recreational activities. They were more likely to report high perceived exam stress, more likely to identify themselves as perfectionists and more likely to perceive the efforts required as unreasonable. Women scored higher on the items of both burnout and depression but reported higher levels of relatedness with their peers than their male classmates. Men were more likely to report feelings of competence, were more likely to believe that studying medicine should be demanding, and more likely to find the efforts required as reasonable.

Burnout

The WB23 survey showed that 42 % of the respondents screened positive for burnout, by agreeing to having experienced at least one of the burnout variables. When including the score of 3, representing those who agreed somewhat, the percentage increases to 67 % (“did not oppose”).

Table 2a: Specific burnout variables

	1-2 (disagree)	3	4-5 (agree)
I feel burned out from studies	46 %	26 %	29 %
I have become more callous toward people since I started the study program	54 %	18 %	27 %

Table 2b: Contingency table for burnout variables

		Become callous		
		Agree	Disagree	Did not oppose
Feel burned out	Agree	**15 %**	14 %	20 %
	Disagree	13 %	**33 %**	13 %
	Did not oppose	21 %	21 %	33 %

In addition to validated questions for burnout, the students were also asked about burnout risk factors.

Table 2c: Risk factors for burnout

	1-2 (disagree)	3	4-5 (agree)
I spend most of my time on my studies	18 %	32 %	51 %
I have little energy/time for leisure activities	39 %	29 %	32 %
The effort required by study program is reasonable (Time demand, syllabus, workload)	24 %	33 %	43 %
I consider myself a perfectionist	24 %	29 %	47 %
Medical school should be difficult and demanding	10 %	32 %	57 %

Common symptoms associated with the emotional exhaustion domain of burnout are displayed in *table 2d*. Participants were asked to recall having experienced any of the symptoms listed for a consecutive period of at least 2 weeks, a) before starting their studies, and b) during medical school. The questionnaire did not contain an alternative for respondents to answer "no symptom experienced". 50 people chose none of the symptoms during their studies, and 176 none before the studies. These are classified as not having experienced any of the listed symptoms. The percentages displayed in table 2d are calculated with the true total of the study participants in mind. The results thus differ slightly from the results in the Appendix, where the non-repliers were not included.

Table 2d: Symptoms experienced for a consecutive period of at least 2 weeks

	Before studying medicine	During medical school
Exhaustion	**41 %**	**68 %**
Intermittently slept less than usual	**36 %**	**59 %**
Unusual procrastination of daily tasks	**24 %**	**59 %**
Loss of engagement in leisure activities	**20 %**	**48 %**
Abnormally irritable/ short temper	**25 %**	**48 %**

Unusual difficulty concentrating	**19 %**	**47 %**
Impaired memory	**10 %**	**39 %**
Intermittently slept more than usual	**28 %**	**37 %**
Anxiety	**24 %**	**35 %**
Isolation	**15 %**	**27 %**
Unexplained abdominal pain or headaches	**17 %**	**27 %**
Intermittent heart palpitations	**9 %**	**21 %**
Use of alcohol/other drugs to relax or unwind	**5 %**	**13 %**

* The numbers are based on student recall and not systematically registered symptoms.

The experience of these symptoms among the UiB students was widespread. Only 7 % (n = 50) said they had none of the symptoms presented. The increased prevalence of symptoms in all categories during the medical program was profound. The results show a rise in symptoms of burnout in all categories after students start their studies. Almost all symptoms listed doubled in intensity, and "Impaired memory" revealed close to a 4-fold increase (289 %). A total of 69 % reported having experienced ≥4 of the symptoms listed and 47 % reported having experienced ≥6. Compared to 30 % experiencing ≥4 and 14 % experiencing ≥6, before the start of the medical program.

Depression

The instrument used to measure depression is known as the two-item Primary Care Evaluation of Mental Disorders (PRIME-MD).

Table 3a: Specific depression variables

	Yes	No
During the past month, have you often been bothered by feeling down, depressed, or hopeless?	39 %	61 %
During the past month, have you often been bothered by little interest or pleasure in doing things?	43 %	57 %

Table 3b: Contingency table for depression variables

		Feeling little interest	
		Yes	No
Feeling down/hopeless	Yes	31 %	8 %
	No	12 %	49 %
Feeling down/hopeless and little interest		31 % said yes to both **51 % had a positive test for depression** = at least one confirming answer	
Do not feel down/hopeless nor little interest		49 % said no to both = neg test for depression	

Students who showed a tendency for burnout (67 %), and students who screened positive for depression (51 %) were more likely to be dissatisfied with the lecture quality and experience more exam related stress. They were more likely to report spending most of their time on

their studies and less likely to have time and energy for recreational activities. Students in these groups were more likely to report a lack of autonomy, competence, and relatedness, struggling more with establishing a relationship with their peers. They were more likely to feel a loss of power to influence faculty and far more likely to report feeling that the medical program did not prioritize their well-being. Both groups had a quality-of-life averaging 5.4, the burnout group reported 48 % CMDs and the depression group reported 49 % CMDs. Students with burnout had a substantially increased chance of also screening positive for depression and vice versa.

Quality of life

The students were asked to evaluate their overall quality of life on a scale from 1-10. A score of 5 or less is determined "clinically meaningful deficit", CMDs.

Table 4: Specific QOL variable

Your overall mental, physical and emotional quality of life over the past month	29 % rating QOL ≤ 5 equaling **CMD** 68 % rating QOL < 8 32 % rated QOL equal to healthy individuals
	Average QOL = 6.5

Self-determination theory

Questionnaire items measuring autonomy, competence, and relatedness

Table 5: Specific variables for the self-determination theory

		1-2 (disagree)	3	4-5 (agree)
Autonomy	The study program provides me with the freedom to design my own day to day learning activities so I can learn in the way most effective for me	32 %	32 %	35 %
	Student input and participation is facilitated (STUND, student representatives, Studentbarometer, semester assessment form)	18 %	37 %	46 %
	Students' input is followed up by the institution and produces results	49 %	36 %	14 %
Competence	I experience feelings of competence through my studies	20 %	40 %	39 %
	The effort expected by the study program are reasonable (Time dedication, curriculum, work effort)	24 %	33 %	43 %
Relatedness	I spend time with my classmates during our free time.	12 %	17 %	71 %
	I share my inner thoughts and feelings with my classmates.	14 %	28 %	72 %
	I am part of a friend group at my study program	13 %	10 %	77 %

Percieved lecture Quality

Table 6

	1-2 (disagree)	3	4-5 (agree)
The lectures are successful in providing a general understanding of the curriculum and a foundation of comprehension	20 %	45 %	34 %
I find the lectures motivating in continuing my studies	22 %	38 %	40 %
I remain in lectures even when I find the lecture to be of bad quality	13 %	12 %	75 %

Perceived exam stress

Table 7

	1-2 (disagree)	3	4-5 (agree)
I perceive exams as stressful	11 %	20 %	69 %
I have worries concerning exams beyond the examination period	34 %	21 %	44 %
The examination is too detail oriented	5 %	17 %	79 %

Student experience

Table 8a

	1-2 (disagree)	3	4-5 (agree)
My well-being and mental health are prioritized by the study program	52 %	36 %	12 %

Table 8b

	Yes	No
Have you ever considered quitting the medical program?	39 %	61 %

Table 8c

	Yes	Unsure	No
Would you recommend the medical program in Bergen to potential medical students?	66 %	27 %	7 %

Discussion

The WB23 survey disclosed that among the medical students at UiB about half (51 %) depicted potential depression. Although consistent with the literature on depression trends for

medical students, these findings are concerning as the students at UiB clearly reflect results in the upper high end of the estimated international range (from 9 % to 56 %) and far above the standard average of 27%.[13] When asked about their quality of life (QOL), the medical students at UiB averaged a score of 6.5, with 29 % giving a score of 5 or lower, which indicates clinically meaningful deficit (CMD) of quality of life. Research concludes that a CMD score institutes a need for immediate exploration and urgent intervention.[35] Compared to findings from University of Minnesota, the UiB students scored around the same as the lowest scoring residents, worse than that of the medical students at the University of Minnesota and worse even than the patients diagnosed with cancer.[35] Only 33 % of the medical students at UiB ranked their QOL equivalent to that of healthy individuals. In the Singh study the healthy individuals group averaged a QOL of 8.3 and only had 2 % CMD.[35]

As previously presented, the self-determination theory highlights the important factors for intrinsic motivation, which tends to result in in-depth understanding while protecting against burnout and depression. However, the majority of the UiB students report they do not feel autonomy in their daily student life. The students report feeling they have little impact on program structure and that their feedback is mostly disregarded. 85 % of the students signaled feeling that their input and grievances saw no results in the end. Research has found that the feelings of frustration and powerlessness were rated as the strongest factors for the development of high stress by the medical students in the UK.[14]One student (WB12) wrote: "*As usual, one could demand higher pedagogical skills from the educators. But we have, as the graduating class, said this in the assessment of almost every semester without anything being done.*" The majority of UiB students reported that they are not given proper opportunity to learn in an autonomous way, suggesting that the study schedule is strict and time consuming. One student (WB23) wrote, "*The study program provides freedom to plan one's own study strategy, if you're willing to "miss" lectures*". Additionally, the students' answers reflect a majority who do not experience feelings of competence through their studies, and that they perceive the efforts needed to maintain the expectations of their studies as unreasonable. Relatedness is the only component of SDT which provides some good news in these results. The WB23 study found that most of the medical students experience adequate relatedness to their peers. About ¾ of the students reported experiencing at least one of the measurements for relatedness, and 57 % said they experienced all three measurements for relatedness. However, there was still a number of students who felt left out, 13 % said they did not experience any of the measurements for relatedness. Additionally, the results indicate that although a majority of the students

experience relatedness to their peers, their feelings of relatedness towards their study program are not reflected as favorably as students feel disregarded by faculty concerning executive decisions for the program. Previous studies on UiB students report that students disclosed experiencing no personal contact with faculty members and often felt invisible and anonymous.[38] The questions surrounding autonomy paint a picture suggesting that students do not feel heard by their study program and express having inadequate opportunities to influence their studies. One student (WB23) stated: "*I spend almost all my time on my studies, and I don't feel that I can structure my study day according to methods that I know from experience give me the best learning. There is no time for it*".

Burnout, risk factors & Coping strategies

In total 67 % of the respondents signaled experiencing at least one of the parameters for burnout in the form of emotional exhaustion and depersonalization. These results are consistent with the literature on burnout in medical students. However, the UiB students reported higher levels of depersonalization, emotional exhaustion, and overall symptoms suggestive of burnout than medical students in the multi-institutional study by Dyrbye and colleagues (2016).[2] There is a substantial rise in burnout symptoms in all categories and a doubling of many compared to before entering medical school. Almost every student (93 %) reported experiencing at least one symptom of emotional exhaustion during their medical education, in which the majority reported experiencing multiple. Students who said they did not feel burned-out nor had become callous still reported feeling a substantial number of symptoms of emotional exhaustion during their studies and saw a rise in symptoms after entering medical school. Additionally, the number of students who reported multiple symptoms was particularly high, and this number increased substantially after students started the medical program.

Research has concluded that medical students' distress does not stem from personal characteristics.[2.6.8.9.10.] Rather life satisfaction is dependent on stress intensity and student capability of practicing adaptive mindsets and adaptive coping mechanisms.[8] During training it is common for students to adapt and create coping mechanism.[7] One student (WB23) wrote: "*I have DEFINITELY become both more apathetic and cynical, which is effective, but kind of a bummer".* However, maladaptive strategies are usually effective only in the short term and become counterproductive and cause negative consequences, such as burnout, [10.20] in the long term.[15] The perfectionism mindset may be a risk factor in the development of burnout. It is considered a personality trait associated with high performance and high

academic achievement. However, studies suggest that perfectionism renders individuals vulnerable to depression, anxiety, inflexible thinking, and burnout.[39] Adaptive perfectionism is known as "healthy" perfectionism. It is characterized by striving towards high but achievable personal standards, and has been linked to high life satisfaction, high academic achievements, and using adaptive coping mechanisms. Maladaptive perfectionism on the other hand is considered the unhealthy form of perfectionism closely associated with neuroticism, depressive symptoms, elevated risk of suicide and academic burnout.[39.40] Adaptive perfectionists see failure as an opportunity to learn and manage to keep their self-esteem intact while their motivation remains high. Relevant for this study is the question of what happens to an adaptive perfectionist in an environment with external high expectations and demands as well as limited time for learning, especially little time for learning from one's own mistakes. Such research was not identified during the literary search for this paper. However, one student (WB12) stated: "*It used to be inspiring not to know things, because it triggered the desire to learn. Now it just feels like I'm stupid – even though I know I'm not*". This student's statement may reflect the experience of an adaptive perfectionist who has become a maladaptive perfectionist by unachievable high demands through medical education. Maladaptive perfectionism is a result of conditioning, and is dependent on unrealistic goal setting, unachievable standards for satisfaction concerning one's own and others' performance, avoiding evaluation by others, and declining needed help.[40] Factors which often are identifiable in medical program strategies and attitudes, and recognizable in overcomplicated, rigid and time-consuming lectures, high detail focus in both lectures and exams, A-F grading systems, an unwillingness to listen to students' complaints and unwillingness to implement student suggestions. Slavin argues that it is the responsibility of the medical schools to help their students unlearn maladaptive coping mechanisms once they are admitted to the medical program.[29] However, most medical schools, not only fail to help students reorganize a healthy study strategy, they also continuously expose students to a destructive learning environment which enable maladaptive perfectionism and limits opportunities to practice adaptive coping mechanisms.[39]

Problem-solving coping, emotional focused coping, and reliance on social support are adaptive coping strategies. Problem-solving coping entails changing or eliminating the source of stress. However, UiB students express they do not feel they get to take part in the structure of their study program, consequently being obstructed from practicing problem solving coping. One student (WB23) wrote: "*Input is facilitated, but I have not yet experienced during my 4 years at the program that the faculty takes that input to heart in any way or are*

open to change". Adaptive copying mechanisms represent ways to cope with stress in a healthy and productive way. However, practicing adaptive coping mechanisms requires a supportive environment. Emotional focused coping includes reducing and processing the emotional distress from a situation in a healthy way. Examples would be journaling, exercise, and social activities, or in other words; a healthy work-life balance. Unfortunately, the scheduled medical program allows for very little excess time and energy to practice this coping mechanism, as demonstrated by the UiB students' responses. The majority reported spending most of their time on their studies and not having time/energy for recreational activities. One student (WB23) stated: "*I mostly spend the majority of the hours I'm awake reading. I don't find it possible for me to engage in any extracurricular activities, both because I don't have time and because I spend all my energy on studying. Many people say that student life is the best time in one's life, but for me it's the worst I've experienced so far"*. Results from the WB23 study showed that students who reported having little time and energy for recreational activities were more likely to score positive for both burnout and depression. They were more likely to be dissatisfied with the lecture quality, experience more exam related stress, and were more likely to report a lack of autonomy, competence, and relatedness. They were more likely to feel a loss of power to influence faculty, far more likely to report feeling that the medical program did not prioritize their well-being, and more likely to have considered dropping out of medical school. Engaging regularly in recreation, hobbies or exercise, having relationships and social support, getting adequate sleep, investing in personal health, reducing debt burdens and avoiding maladaptive coping mechanisms lowers the risk of burnout.[2] One study found that inadequate social activities among medical students were linked to impaired psychological health, while medical students with the highest 10 % life satisfactions score were those who spent the most time on social activities.[1] Stable high life-satisfaction characterized students who had less academic worries, perceived medical school as interfering less with social and personal life, were more likely to perform adaptive coping, and were more likely to seek social support when in distress.[8]

From the above findings it seems legitimate to conclude that a study environment which can give students' academic confidence and allow them time for recreational activities and social activities will enable students to achieve stable high life satisfaction. High life satisfaction may enable the development of confident, capable, and knowledgeable students and physicians, who will stay in the field and provide better patient care. Paradoxically, research has shown that socializing decreases in medical school and that many medical students feel guilty for spending their time on social activities and personal wellbeing rather

than their studies, even though they recognize the importance of doing so.[8] The only adaptive coping strategy that many medical programs currently allow for is reliance on social support which entails coping with stress through social interaction with loved ones and peers. The WB23 study shows that the majority of the student respondents have the opportunity to rely on social support with their peers as a coping mechanism.

Studies indicate that ensuring enough time for leisure activities and rest should be considered an important educational strategy to improve students' well-being and learning, while also reducing stress. However, being allowed adequate time to do the necessary mental health activities in a heavily loaded medical program is very difficult. Should a student follow the current program and participate in *all* the scheduled lectures and group activities, it would be very difficult to exercise adaptive coping mechanisms simultaneously to the scheduled program.

The 2015 Macro plan

UiB used to have a strictly traditional curriculum with late clinical period and late introduction of patients, and a clear division between subjects. In 2015 the new curriculum was introduced and is what's used today. In preparation for the new curriculum the medical program designated a committee to develop a plan for the new curriculum called "The Macro plan".[41] In this plan they introduce some of the common complaints of the curriculum, such as: students find the preclinical years demotivating and struggle to understand what the job of a doctor entails. Unsatisfactory collaboration and communication of the administration makes the curriculum disjointed and jagged. Noncommunication from the lecturers and between lecturers causes the same problems in individual teaching subjects and between subjects, and a high demanding and time-consuming curriculum causing curriculum overload. The new curriculum aimed to integrate preclinical and clinical lessons and focus on the role and identity of being a doctor, as well as aiming to optimize the curriculum time consumption, specifically work against curriculum overload, and create an understandable index for the structure and content of subjects. The macro plan entailed many suggestions for change, such as the importance of reducing lecture detail and the need for clarity through structure. However, there is a continuing narrative of conflicting interests in the blueprint. Much of the plan entails the desirable additions. Increase the curriculum for general practice, addition of curriculum for doctor identity and leadership, adding elective subjects in addition to mandatory curriculum, and adding mentor groups.[41] Yet, the focus of reduction seems to disappear from the pressing concerns. Towards the end of the Macro plan, the focus of

reduction makes way for a note expressing concern that the basic science curriculum will become pressed under the new additions, which is presented as just an unfortunate fact.[41]

The Macro plan suggested that to achieve reduction in curriculum overload it was necessary to reduce lecture time to 10 hours per week, as well as limit scheduled group activates in order to give students time for autonomous study and recreational activities.[41] As shown in the 8 below, the current semester schedules fail to meet this goal. As an example, the 9th semester (MED9) has an average 17.9 hours of lectures ratio per week, ranging from 8 to 24 hours. When also including the scheduled group activities, of which most are mandatory, the average increases to 18,5 hours per week. This semester included 6 weeks of mandatory 8–16-hour days of clinical participation which are *not* included in these calculations.

Table 9: Student lecture schedules by semester

Semester	**Lecture hours/week**	**Lecture Hours/week + group activities**	**Lowest Hour/w**	**Highest Hour/w**	**Reached Goal** ≤ 10h
3	14.1	16.8	4	26	4 of 15
4	11.4	14.3	2	25	10 of 20
6	12.4	17.7	3	28	5 of 16
8	17.3	23.3	11	23	0 of 8
9	17.9	18.5	8	24	1 of 11

The Macro plan introduced many ideas for restructuring, emphasizing the necessity of increasing lecturers' ability to secure a balanced and good student experience. However, the data from the WB23 study still show a majority of student dissatisfaction with lecture quality. Findings suggest that the quality of the lectures at UiB is considered subpar by the students. When many students decide to stay in lectures, even though they consider it to be of poor quality, they waste of the students' time. One student (WB23) wrote: "*There's way too many lectures, and I often find that the content doesn't cover the knowledge level that is desired. As a result, we end up spending large amounts of time in lectures just to realize that you have to set aside additional time for self-study in order to achieve the depth and understanding necessary. Which creates a huge amount of additional work in an already busy schedule. I often don't have time to review material before the exam because I haven't gotten through the curriculum*". Such unproductive time-consumption lays the foundation for burnout. Although the student program of 2015 has managed to add missing components such as early clinical and patient exposure, they have not been successful in reducing the scheduled programing and curriculum overload. Another student (WB23) wrote: "*I have the exam at the beginning*

of June but struggled to sleep last night (April 16) because I'm stressed about getting through the curriculum". Although the purpose of the new medical program plan was to modernize, the results indicate a transfer of traditional values favoring high detail, general curricular overload, and cramming of information.

The WB12 survey vs the WB23 survey

When the well-being survey of 2012 was conducted, the new medical program of 2015, where preclinical and clinical years were integrated, had not yet been implemented. This was strongly reflected in the responses as a main problematic issue. Other issues were high curriculum overload, limited time for autonomous studying and recreational activities due to excessive time spent in lectures, and reduced feelings of competence.[42] Additionally, students expressed an absence of desired feedback, clearer definition of the syllabus and unclear learning objectives. The students also reported wide dissatisfaction with their lecturers based on the large variety between lecturer quality as well as low teaching skill and an impression of indifference.[43]

Table 10 provides a comparison between similar questions asked in both surveys. They indicate that students feel they spend more of their time on studies now than 11 years ago. As one of the goals of the curriculum revision was to reduce curriculum overload, this indicates that the reform may have failed on this central goal.

Table 10: Well-being survey comparison

	WB12	**WB23**
Response rate	65.9 % of 889	69.5 % of 1101
Female/Male	69 % / 31 %	73 % / 27 %
I experience feelings of competence	49 % agreed	39 % agreed
The effort expected of you is reasonable	69 % agreed	43 % agreed
Time spent on studies	35 % said they spent too much time on their studies	51 % said they spent most of their time on their studies
Have considered quitting	38 %	39 %
Would recommend the medical program in Bergen	85 % yes	66 % yes

The percentage that has considered quitting their studies is relatively unchanged and remains high. It is concerning that a lower portion of students would recommend the medical program to a friend now than before. Fewer students express feeling competence through their studies

in 2023 than in 2012. Additionally, fewer students now feel that the effort expected from them is reasonable compared to before.

The WB12 had multiple suggestions for improvements to the study program based on student feedback. Most have not been implemented and are consequently persisting problem areas for students today. These include motions for reducing curriculum overload, a greater focus on teaching ability to increase effective learning, less detail focus, and shift to a focus on understanding. Additionally, desiring better subject structure and a better-defined syllabus and clear learning objectives are still aspects that concern the students of UiB. It seems that the only thing that was clearly expressed as problematic in the WB12 and has been resolved, is the late introduction of clinical experience and observation of the role as a physician.

The comparison indicates that the goals presented by the macro plan of 2015 have not yet been reached. However, these circumstances are not limited only to the UiB medical program. A longitudinal study done on Norwegian medical students in 2019 found that subject wellbeing among medical students in Norway were lower today than 20 years ago. The most important negative contributions of this development were perceiving medical school as cold and threatening, concerns about work and competence, concerns around finances and accommodation, and high perceived exam stress[1]. These results indicate a prolonged negative trend in the mental health and well-being of Norwegian medical students. There is a need for changes to better support the students through their studies, and to examine what curriculum revisions can be made. Later in this study, we present a list of possible changes, based on literature review.

The medical programs of Norway

Norway has four medical school programs, all with different theoretical curriculum, clinical practice, assessment methods, and teaching practices. The general attitude is that no matter which medical program students attend, they will receive a well-rounded and adequate education. This may be true for theoretical knowledge and practical skills, as research reveals that students eventually manage to filter out the unnecessary curriculum on their own and retain more or less the same relevant information by graduation, independent of the medical program they attended.[27] The structure of the educational program, however, impacts students' well-being much more profoundly,[30,12] therefore, it is important to explore how the medical schools in Norway differ from each other.

In 2022, medical students at UiB published research comparing exams practices between the medical school programs. They found that the number of exams that the medical

schools enforced varied greatly. However, all four schools greatly applied multiple choice question tests (MCQ) even though several expressed concern for the learning habits these exams generated in the students. The choice of MCQ was based on the need for measure and controlling students' knowledge, striving for objectivity and standardization while spending few resources.[37] The authors of the study concluded that the need for an easy assessment system for faculty, which demanded little resources, was prioritized higher than the practice of using exams as a learning opportunity and direction for learning, in all the medical programs. Consequences of such priority include a culture for memorization, while rewarding properties for reflection, critical thinking, and well written expression were far less common.[37]

Table 11: Outline of exam requirments between the medical facilities of Norway

	UiB	UiO	NTNU	UIT
Oral Exams	4	10	7	4
Written Exams	15	12	8	7
Total	**19**	**22**	**15**	**11**

The study found that the administrators of the medical programs were satisfied with their own structure. However, their students did not share this sentiment. The studentbarometer has shown that medical students are more likely to be unhappy with assessments than non-medical students.[37] The students expressed frustration over exams that often included recycled questions from previous years with an overall focus on memorization. The 2015 macro program for UiB stated that "*With the new learning initiatives, exams must be changed accordingly, otherwise there will be little change in students' learning behavior. Assessment methods must focus to a greater extent on learning*".[41] The initiatives suggested throughout this paper will have an insignificant effect on student mental health if adjustments are not reflected in the assessment system design.

There is a clear rift between the faculty agenda and the student agenda, as students' express aspirations for exams which allow them the opportunity to show their knowledge, while administrators have a need to verify the student knowledge and differentiate the students.[37] One faculty member expressed the position, saying it would be considered "a failure" should no one fail the exam.[37] Such attitudes are the opposite of what Slavin argues is productive and beneficial for medical students' academic success and mental health. It reflects the old fashioned attitudes in which authoritarian leadership is centered, while Slavin argues for student centered medical programs, which promote autonomy.[30.12] Although the

study by Raaheim found that substantial student unhappiness with the current assessment methods and faculty expressed several concerns with predominantly MCQ assessment, changes in assessment methods have not been prioritized nor investigated at UiB.

The publicly funded Norwegian Agency for Quality Assurance in Education (NOKUT) sends out a student survey (Studentbarometeret) every year to collect information about students' experience of educational quality. Attempting to compare the student experience and student well-being between the medical school programs of Norway for this paper, data from Studentbarometeret from 2019, 2020, 2021, and 2022 were used. For this cause, only questions concerning school structure and curriculum as well as student well-being associated with their studies were included. For this estimation, the times each medical program had the highest and lowest score for a variable was recorded, as well as the number of times each institution scored below an average of 3 on the 5-point scale.

Table 12: Studentbarometer results between the Norwegian medical schools 2019-2022

Green fill = Score most favorable for student well-being

Orange fill = Second to least favorable for student well-being

Yellow fill = Second best score favorable for student well-being

Red fill = Score least favorable for student well-being

		UiB	**UiO**	**NTNU**	**UiT**
2019	Times with the **highest scores**	**4** (6 %)	**3** (4 %)	**19** (28 %)	**50** (73 %)
	Times with the lowest score	**26** (40 %)	**40** (58 %)	**11** (16 %)	**3** (4)
	Times with scores below 3	**7** 10 % of all relevant questions	**8** 12 % of all relevant questions	**9** 13 % of all relevant questions	**2** 3 % of all relevant questions
2020	**Highest score**	**5** (8 %)	**2** (3 %)	**14** (23 %)	**51** (84 %)
	Lowest score	**19** (31 %)	**38** (62 %)	**10** (16 %)	**0** (0 %)
	Below 3	**10** (16 %)	**11** (18 %)	**8** (13 %)	**3** (5 %)
2021	**Highest score**	**0** (0 %)	**4** (6 %)	**21** (30 %)	**50** (71 %)
	Lowest score	**44** (63 %)	**22** (31 %)	**16** (23 %)	**1** (1 %)
	Below 3	**22** (31 %)	**16** (23 %)	**15** (21 %)	**3** (4 %)
2022	**Highest score**	**8** (15 %)	**3** (6 %)	**12** (23 %)	**41** (77 %)
	Lowest score	**21** (40 %)	**29** (55 %)	**11** (21 %)	**2** (4 %)
	Below 3	**13** (25 %)	**12** (23 %)	**9** (17 %)	**7** (13 %)

* Percentage do not always equal 100 as instances were two or more held the highest/lowest score occurred.

The continuous low scores at UiB confirm lack of success in improving the medical curriculum, as reflected in the negative trend shown in the WB12 and WB23 comparison. Variables to consider is that both NTNU and UiT are younger faculties that may more easily be inclined for innovation and new thinking, while UiO and UiB have a long history and may have established traditions embedded in set cultures. Additionally, the student groups are smaller at NTNU and UIT, which may make it easier to establish a closer connection between faculty and students.

The medical programs in Norway have the exclusive right of providing students with the license to practice medicine. As medical education is prestigious, popular, and has many applicants with top grades, the medical programs do not have to work on motivating students to choose their program. They automatically get many well-suited applicants. There is no other way of becoming a physician than completing the medical studies, apart from studying outside of Norway. After starting their education, medical students rarely leave medical school, perhaps because the bar for quitting is very high after having spent substantial energy to be accepted in the first place. Research shows that students will do almost anything to succeed in becoming physicians, and many will enter a survival state to prevail.[27] [7] Students develop coping mechanisms to survive, and they accept living with both lower mental health and quality of life. In fact, initiatives for improving students' well-being may be met with resistance. When the SLU program initiated their new wellness-program, they received quite a lot of push back from both administration and students. The mindfulness and resilience curriculum were met by resentment from a number of students who found it to be "too soft and touchy-feely".[30] Concurrently, 89 % of the UiB respondents did not oppose the sentiment that medical school should be difficult and demanding, indicating that attitudes towards medical school as being demanding, harsh and cold is well established in the student group as well as in the faculty.

This study and the research it builds on suggest that medical schools experience little incentive for providing students with as good experience as possible of medical school. The WB12 has not been followed by new studies or examinations from the faculty to explore students' well-being, and the new curriculum of 2015 has not been evaluated to examine how students are doing now. It is difficult to find clear expressions of concern for students' well-being in the implementations and evaluations that have been done on a program level the last 10 years. The Raaheim study and studentbarometeret show that UiB has access to information about students' experiences of medical school, how that compares to other medical programs, and suggestions for curricular changes. Still, it is difficult to find evidence

in these data that UiB has been successful in improving students' experiences. One student (WB12) stated, "*Lousy lecturers make you feel that if you do become a doctor in the end, it's more in spite of UiB rather than due to*". The results also show that it is possible to do better, as NTNU and UiT scores indicate.

Lessons from the self-determination theory

Historically educators have mainly focused on how students are taught rather than how much. Contrary to popular belief, more is not always better. Slavin uses the Yerkes-Dodson curve to illustrate that eventually more becomes too much and results in negative outcomes, both in mental health and academic performance (see Figure 2). Initially increasing "stress" or class time/curriculum, performances increase, but eventually if stress continues to increase performances level off, and ultimately declines.[29] Many educators and institutions tend to think that they are most successful if they control most of the students' activities based on a carefully designed curriculum and well-chosen teaching methods.[27] However, SDT informs us that by not allowing the students to choose how to learn for themselves, they are less likely to identify with the material or to integrate it and thus will be less likely to remember what they have learned, and what they do retain will be less integrated into their identity as developing physicians.[27]

Figure 2: The Yerkes-Dodson curve

Several studies argue that medical education methods and curricular structures applied in today's medical schools are constructed with a focus on practicality and based upon tradition rather than theory-based learning methods. When medical school gives in to the impulse of need to control the students, they inhibit the development and learning the student could have achieved through their own means.[37,27] Learning requires cognitive and affective conditions to be successful. To secure students' autonomy and the benefits which autonomy creates on learning and knowledge, teachers and schools need to create space and opportunity to develop autonomy skills, and fewer measures that control motivation by regulations, requirements, pressure, and external rewards. Students benefit when teachers support their

autonomy, and autonomously motivated students thrive in educational settings. Teachers need to be instructed in how to create an autonomous environment in their teaching space, and such autonomy supportive behaviors require insight and practice. [27] In addition, academic medicine and health institutions need to confront the professional culture of indifference towards personal wellness, suggesting that work should always be prioritized over personal needs, and discouraging doctors from acknowledging their personal struggles and vulnerabilities.[2]

What does this mean for UiB?

The present study paints a poor picture of medical student life, with too many experiencing burnout and depression. One student (WB23) wrote, "*During the exam period, my whole life comes to a standstill. I often read until I start crying, but once I've managed to pull myself together, I again pick up the books. My husband ends up with sole responsibility for our household. I sleep poorly and have to use alarms on my phone to remember to eat*". The medical field is large, and it is impossible to know it all. The analogy of drinking from a firehose has often been used in medical schools to describe the life of a medical student.[5] Students are encouraged to become comfortable with never being able to know the whole curriculum. Yet, faculty create lectures and exams in which they expect their students to know everything in great detail and with in-depth understanding, while simultaneously urging the importance of a respectable work-life balance. In addition, the firehose is becoming continues larger as the amount of knowledge in the field expands. Morcos argues that modern day advances in technology and medicine mean that medical students are expected to learn significantly more information than their predecessors but in the same amount of time.[5] While the medical field is continuingly expanding several educators insist on not only including the latest information but also expecting students to be familiar with the old knowledge and practices which are no longer in practical use. An example is the subject of ENT (ear, nose, and throat) at UiB where students are instructed and assessed in the use of Siegle Otoscope and headlamp in addition to the modern otoscope.

Medical students will be at lectures and seminars for up to 8 hours daily. During lectures students strive to learn from an overloaded curriculum then spending their evenings and weekends reading and reviewing learning material.[5] Morcos points out that alongside the high academic from the University, students are expected to look after one's own mental and physical health, have a relevant part time job within the field, work out, create new friendships, maintain old friendships, get into romantic relationships, maintain familiar

relationships, eat and learn to cook, and invest in hobbies and personal interests for their mental health. During clinical rotations students participate in clinical rounds at the hospital, from 8-16, where they feel constantly evaluated by instructors and residents. Morcos argues that being under constant scrutiny creates an enormous amount of stress.[5] After a long day in the wards constantly learning new things and taking in new experiences and impressions while feeling scrutinized, students are expected to go home and spend their evenings and weekends studying.[5] Imagine yourself doing this. Everyday. For six years. Without breaks and without holiday, as the holidays will be mostly spent by most students reviewing the teaching material and working a part-time job. One student (WB23) states, "*my burnout rate is quite high throughout. I feel pressured to continue in the summer to remember what has already been taught"*. Many students in Norway have a part-time job as the national student financial support does not cover todays living expenses. In addition, medical students feel they must take on employment to strengthen their residency (LIS) application.[5] However, research shows that employed medical students increase their risk of developing burnout, and if already burned out, employment is strongly associated with not recovering from burnout.[2]

Implementing student wellness programs, reducing the stigma concerning mental illness, increasing access to mental health professionals, and generally creating more things for the students to do does not work. A burned-out student is an unproductive student.[2] When medical schools provide these activities and programs to balance out the negative aspects of medical education[12] they risk communicating that a general decline in mental health and student distress is an anticipated unfortunate fact and a rite of passage for all medical students. In addition to risk placing blame and responsibility on students' inability to cope, these efforts allow the system to continue per status quo and accumulate more unnecessary stress on the students by expecting them to do more. This is in direct conflict with the research which concludes that medical students desperately need to do less, reducing time in class and increasing time for self and general rest. Implementing a large and time-consuming amount of wellness programs are not problematic in itself, however it becomes problematic if these wellness programs become add-ons to a busy schedule rather than substitutes for superficial curriculum.[2] UiB has established several independent wellness programs, outside the medical curriculum, available for all their students, including a mentorship program supporting transition to student life for first-year students. While these are, in principle, good initiatives, this study shows that medical students need changes in the curriculum that allow time and energy to be able to utilize these wellness programs. The WB12 study charted the status of the medical students at UiB in 2012, and 11 years later the student experience

reported is worse than before, a trend coherent with the findings by Sletta et al. (2019) of medical students in Norway the past 20 years. The current strategy does not work, showing that there is a need to create a new strategy in which medical students' well-being is in the center of the reformed medical curriculum.

Implications

Research on health institution interventions showed that organization-directed interventions are the most effective for reducing burnout, but these interventions were rarely implemented for health institutions.[43] Efforts to solve burnout in institutions usually focus on individual interventions centered around stress reduction training rather than organizational interventions, which typically require investment of personal time that is already in short supply for physicians.[9] Individual focused interventions can be effective but only when paired with organizational approaches. However, most health institutions would put all efforts towards individual focused interventions, even though such intervention only result in small reductions in burnout.[43]

The following table is a collection of literature-based initiatives which support student mental health and student well-being by reducing stress and improving the learning environment. It is important to note that initiatives for improving the learning environment are only effective when curricular overload has been effectively reduced. Enjoyment in learning is only possible outside survival mode.

Table 13: Stress reducing initiatives

Elements in medical education	How	Literature based effect	Ref
Grading system	True pass/fail grading scale. Consisting only of these two possible outcomes	Reduction in perceived stress and an improvement in overall well-being and group cohesion. Increase in student satisfaction with the medical education quality, the evaluations system and the learning environment. A-F grading often creates a competitive environment that promotes anxiety and peer competition rather than collaborative learning. Research shows that eliminating such a grading system does not affect performance.	2. 15. 1

Curriculum overload	10 % reduction on all courses.	Primarily to reduce the amount of detail taught.	[12]
Teaching	More student-led teaching		[30]
	Organize smaller learning communities	Smaller learning communities have been shown to reduce stress, anxiety, and depression	[2]
	Mandatory courses for faculty on pedagogical teaching	Ensure that core faculty members have the requisite teaching skills needed to establish an optimal learning climate, provide effective feedback and foster reciprocal relationships.	[2,12]
	Quizzes and mid-module practice test	Provide feedback and feelings of competance	[30]
Effective mental health programs	Stress management courses and resiliency training • Mindfulness • Communication skills training • Self-care & exercise (subsidize) • Adaptive coping mechanisms	Small-group programs oriented around promoting community, connectedness and meaning	[18]
	Depression and burnout screening	Positive screening followed up with treatment services	[30]
	Longitudinal Electives	Freedom to explore, create mentorship with faculty, research with continuity	[12]
	Social events across grades	Increase feelings of relatedness	[2,12]

Strengths and weaknesses

The Well-being questionnaire consists of items from multiple validated questionnaires and items abstracted from academic literature. Several of these items have high specificity and/or sensitivity. Additional survey questions are inspired by academic literature on similar subjects to this study, which provides validity. Additionally, the study had a very high response rate by the UiB students, and the probability that the answers reflect the student mass is high.

Some literature hypothesizes that the rise of women participation in the medical programs may explain the increase in both depression and anxiety.[1] However, a study done by McKerrow et al (2020) found that in some research there is a significant difference in self-reported depression and anxiety between genders, but in some research men score higher and in others the women do, while some research found there to be no difference.[10] Considering

these previous inconclusive findings and the many socially influential variables around gender we have decided to not discuss the statistical differences between the parameters of gender further.

Students may have a recall bias when they respond to questions about their health and well-being from before medical school and may over- or underscore how things were. Students have not been subjected to a psychological evaluation of their health, rather results are based on self-reported experiences. There may be other elements than the medical curriculum that affect their well-being, and the scores in such surveys as this may be higher or lower than if students had been clinically tested. The choice of not doing statistical tests on the data may have made us overlook potential positive and negative findings. There is also a possibility that discontent in some areas may spill over to other questions, so that respondents choose more negative responses to "get back" at the university for being seen as disinterested and not listening to students' voices. This may lead to exaggerated measures of for instance burnout and depression.

Conclusion

The UiB medical program seems to currently be in a position of denial when it comes to students' well-being. At the very least students' mental health is not prioritized as a leading principle for structuring the medical curriculum. Instead, wellness programs and mental health support are available for those unfortunates who are not able to cope with their life and studies. Meanwhile, students on a large scale continue to experience the learning environment as potentially destructive, in a world where the medical field continues to get increasingly extensive at a faster rate than ever before. Medical students' mental health, physical health, and quality of life are on a negative trend, having gotten worse over the last few decades in traditional medical programs. This study shows that UiB's initiatives have been unsuccessful, and that the faculty of medicine has not prioritized interventions known by research to improve students' academic performance and well-being. There are several examples of medical schools that have made the necessary structural change and successfully reduced student distress and increased student satisfaction, while simultaneously increasing students' academic performance. The blueprint for their success is concrete, simple, and inexpensive. By prioritizing medical students' well-being and implementing well documented and effective initiatives for their students, UiB can improve students' well-being and mental health, while also strengthening their academic performance.

References

[1] Sletta, C., Tyssen, R., & Løvseth, L. T. (2019). Change in subjective well-being over 20 years at two Norwegian medical schools and factors linked to well-being today: a survey. *BMC medical education*, *19*(1), 45. https://doi.org/10.1186/s12909-019-1476-3

[2] Dyrbye, L., & Shanafelt, T. (2016). A narrative review on burnout experienced by medical students and residents. *Medical education*, *50*(1), 132–149. https://doi.org/10.1111/medu.12927

[3] Dyrbye, L. N., Harper, W., Durning, S. J., Moutier, C., Thomas, M. R., Massie, F. S., Jr, Eacker, A., Power, D. V., Szydlo, D. W., Sloan, J. A., & Shanafelt, T. D. (2011). Patterns of distress in US medical students. *Medical teacher*, *33*(10), 834–839. https://doi.org/10.3109/0142159X.2010.531158

[4] Ishak, W., Nikravesh, R., Lederer, S., Perry, R., Ogunyemi, D., & Bernstein, C. (2013). Burnout in medical students: a systematic review. *The clinical teacher*, *10*(4), 242–245. https://doi.org/10.1111/tct.12014

[5] Morcos, G., & Awan, O. A. (2023). Burnout in Medical School: A Medical Student's Perspective. *Academic radiology*, *30*(6), 1223–1225. https://doi.org/10.1016/j.acra.2022.11.023

[6] Brazeau, C. M., Shanafelt, T., Durning, S. J., Massie, F. S., Eacker, A., Moutier, C., Satele, D. V., Sloan, J. A., & Dyrbye, L. N. (2014). Distress among matriculating medical students relative to the general population. *Academic medicine : journal of the Association of American Medical Colleges*, *89*(11), 1520–1525. https://doi.org/10.1097/ACM.0000000000000482

[7] Dyrbye, L. N., West, C. P., Satele, D., Boone, S., Tan, L., Sloan, J., & Shanafelt, T. D. (2014). Burnout among U.S. medical students, residents, and early career physicians relative to the general U.S. population. *Academic medicine : journal of the Association of American Medical Colleges*, *89*(3), 443–451. https://doi.org/10.1097/ACM.0000000000000134

[8] Kjeldstadli, K., Tyssen, R., Finset, A., Hem, E., Gude, T., Gronvold, N. T., Ekeberg, O., & Vaglum, P. (2006). Life satisfaction and resilience in medical school--a six-year longitudinal, nationwide and comparative study. *BMC medical education*, *6*, 48. https://doi.org/10.1186/1472-6920-6-48

[9] Shanafelt, T. D., Boone, S., Tan, L., Dyrbye, L. N., Sotile, W., Satele, D., West, C. P., Sloan, J., & Oreskovich, M. R. (2012). Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Archives of internal medicine*, *172*(18), 1377–1385. https://doi.org/10.1001/archinternmed.2012.3199

[10] McKerrow, I., Carney, P. A., Caretta-Weyer, H., Furnari, M., & Miller Juve, A. (2020). Trends in medical students' stress, physical, and emotional health throughout training. Medical education online, 25(1), 1709278. https://doi.org/10.1080/10872981.2019.1709278

[11] Dyrbye, L. N., Thomas, M. R., Massie, F. S., Power, D. V., Eacker, A., Harper, W., Durning, S., Moutier, C., Szydlo, D. W., Novotny, P. J., Sloan, J. A., & Shanafelt, T. D. (2008). Burnout and suicidal ideation among U.S. medical students. *Annals of internal medicine*, *149*(5), 334–341. https://doi.org/10.7326/0003-4819-149-5-200809020-00008

[12] Slavin, S. J., Schindler, D. L., & Chibnall, J. T. (2014). Medical student mental health 3.0: improving student wellness through curricular changes. *Academic medicine : journal of the Association of American Medical Colleges*, *89*(4), 573–577. https://doi.org/10.1097/ACM.0000000000000166

[13] Rotenstein, L. S., Ramos, M. A., Torre, M., Segal, J. B., Peluso, M. J., Guille, C., Sen, S., & Mata, D. A. (2016). Prevalence of Depression, Depressive Symptoms, and Suicidal Ideation Among Medical Students: A Systematic Review and Meta-Analysis. *JAMA*, *316*(21), 2214–2236. https://doi.org/10.1001/jama.2016.17324

[14] Firth J. (1986). Levels and sources of stress in medical students. British medical journal (Clinical research ed.), 292(6529), 1177–1180. https://doi.org/10.1136/bmj.292.6529.1177

[15] Dyrbye, L. N., Thomas, M. R., & Shanafelt, T. D. (2005). Medical student distress: causes, consequences, and proposed solutions. *Mayo Clinic proceedings*, *80*(12), 1613–1622. https://doi.org/10.4065/80.12.1613

[16] Dzau, V. J., Kirch, D. G., & Nasca, T. J. (2018). To Care Is Human - Collectively Confronting the Clinician-Burnout Crisis. The New England journal of medicine, 378(4), 312–314. https://doi.org/10.1056/NEJMp1715127

[17] Onkoadmin. November 2023. Leger tar livet sitt. OnkoNytt. https://onkonytt.no/leger-tar-livet-sitt/

[18] West, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2018). Physician burnout: contributors, consequences and solutions. Journal of internal medicine, 283(6), 516–529. https://doi.org/10.1111/joim.12752

[19] Zindel, M., Cappelucci, K., Knight, H. C., Busis, N., & Alexander, C. (2019). Clinician Well-Being at Virginia Mason Kirkland Medical Center: A Case Study. NAM perspectives, 2019, 10.31478/201908c. https://doi.org/10.31478/201908c

[20] Mealer, M., Moss, M., Good, V., Gozal, D., Kleinpell, R., & Sessler, C. (2016). What is Burnout Syndrome (BOS)?. American journal of respiratory and critical care medicine, 194(1), P1–P2. https://doi.org/10.1164/rccm.1941P1

[21] Schonfeld, I. S., Bianchi, R., & Palazzi, S. (2018). What is the difference between depression and burnout? An ongoing debate. *Rivista di psichiatria*, *53*(4), 218–219. https://doi.org/10.1708/2954.29699

[22] *Emotional exhaustion during times of unrest*. (2023, July 13). Mayo Clinic Health System. https://www.mayoclinichealthsystem.org/hometown-health/speaking-of-health/emotional-exhaustion-during-times-of-unrest

[23] Leonard, J. (2018, October 24). *How to recognize and cope with emotional exhaustion*. https://www.medicalnewstoday.com/articles/323441

[24] Dyrbye, L. N., Shanafelt, T. D., Sinsky, C. A., Cipriano, P. F., Bhatt, J., Ommaya, A. K., West, C. P., & Meyers, D. J. (2017). Burnout among health care professionals: A call to explore and address this underrecognized threat to Safe, High-Quality care. NAM Perspectives, 7(7). https://doi.org/10.31478/201707b

[25] Dyrbye, L. N., Thomas, M. R., & Shanafelt, T. D. (2006). Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. Academic medicine : journal of the Association of American Medical Colleges, 81(4), 354–373. https://doi.org/10.1097/00001888-200604000-00009

[26] Dyrbye, L. N., Thomas, M. R., Harper, W., Massie, F. S., Jr, Power, D. V., Eacker, A., Szydlo, D. W., Novotny, P. J., Sloan, J. A., & Shanafelt, T. D. (2009). The learning environment and medical student burnout: a multicentre study. Medical education, 43(3), 274–282. https://doi.org/10.1111/j.1365-2923.2008.03282.x

[27] Ten Cate, T. J., Kusurkar, R. A., & Williams, G. C. (2011). How self-determination theory can assist our understanding of the teaching and learning processes in medical education. AMEE guide No. 59. Medical teacher, 33(12), 961–973. https://doi.org/10.3109/0142159X.2011.595435

[28] Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. The American psychologist, 55(1), 68–78. https://doi.org/10.1037//0003-066x.55.1.68

[29] Slavin, S. (2018). Medical Student Mental Health: Challenges and opportunities. Medical Science Educator, 28(S1), 13–15. https://doi.org/10.1007/s40670-018-0622-6

[30] Slavin S. (2019). Reflections on a Decade Leading a Medical Student Well-Being Initiative. Academic medicine : journal of the Association of American Medical Colleges, 94(6), 771–774. https://doi.org/10.1097/ACM.0000000000002540

[31] Kiessling, C., Schubert, B., Scheffner, D., & Burger, W. (2004). First year medical students' perceptions of stress and support: a comparison between reformed and traditional track curricula. Medical education, 38(5), 504–509. https://doi.org/10.1046/j.1365-2929.2004.01816.x

[32] Begenau, J., & Kiessling, C. (2019). The Berlin reformed curriculum in undergraduate medical education: a retrospective of the development history, principles, and termination. GMS journal for medical education, 36(5), Doc62. https://doi.org/10.3205/zma001270

[33] West, C. P., Dyrbye, L. N., Sloan, J. A., & Shanafelt, T. D. (2009). Single item measures of emotional exhaustion and depersonalization are useful for assessing burnout in medical professionals. Journal of general internal medicine, 24(12), 1318–1321. https://doi.org/10.1007/s11606-009-1129-z

[34] Whooley, M. A., Avins, A. L., Miranda, J., & Browner, W. S. (1997). Case-finding instruments for depression. Two questions are as good as many. Journal of general internal medicine, 12(7), 439–445. https://doi.org/10.1046/j.1525-1497.1997.00076.x

[35] Singh, J. A., Satele, D., Pattabasavaiah, S., Buckner, J. C., & Sloan, J. A. (2014). Normative data and clinically significant effect sizes for single-item numerical linear analogue self-assessment (LASA) scales. Health and Quality of Life Outcomes, 12(1). https://doi.org/10.1186/s12955-014-0187-z

[36] Sloan, J. A., Aaronson, N., Cappelleri, J. C., Fairclough, D. L., Varricchio, C., & Clinical Significance Consensus Meeting Group (2002). Assessing the clinical significance of single items relative to summated scores. Mayo Clinic proceedings, 77(5), 479–487.

[37] Raaheim, O. F., Raaheim, D. F., Reikvam, H., & Kvernenes, M. (2022). Eksamensformer i de norske medisinstudiene. Tidsskrift for Den Norske Legeforening. https://doi.org/10.4045/tidsskr.22.0337

[38] Schei, E., Johnsrud, R. E., Mildestvedt, T., Pedersen, R., & Hjörleifsson, S. (2018). Trustingly bewildered. How first-year medical students make sense of their learning experience in a traditional, preclinical curriculum. Medical education online, 23(1), 1500344. https://doi.org/10.1080/10872981.2018.1500344

[39] Wang, Q., & Wu, H. (2022). Associations Between Maladaptive Perfectionism and Life Satisfaction Among Chinese Undergraduate Medical Students: The Mediating Role of Academic Burnout and the Moderating Role of Self-Esteem. Frontiers in psychology, 12, 774622. https://doi.org/10.3389/fpsyg.2021.774622

[40] Melrose S. (2011). Perfectionism and depression: vulnerabilities nurses need to understand. Nursing research and practice, 2011, 858497. https://doi.org/10.1155/2011/858497

[41] Universitetet i Bergen. Makroplan. November 2023. https://ekstern.filer.uib.no/mofa/studie/Medisin/makroplan_for_ny_studieplan_medisin_2015_-_revidert_november_2014.pdf

[42] Nystad A, Dahl EH, Neteland I, Riisdal JG, Valestrand EA. (2012) Trivselsundersøkelse blant medisinstudenter ved Det medisinsk-odontologiske fakultet, UiB. Bergen: Medisinsk Fagutvalg, Universitetet i Bergen.

[43] Panagioti, M., Panagopoulou, E., Bower, P., Lewith, G., Kontopantelis, E., Chew-Graham, C., Dawson, S., van Marwijk, H., Geraghty, K., & Esmail, A. (2017). Controlled Interventions to Reduce Burnout in Physicians: A Systematic Review and Meta-analysis. JAMA internal medicine, 177(2), 195–205. https://doi.org/10.1001/jamainternmed.2016.7674

Appendix

Content

Distribuert Spørreskjema

Trivselsundersøkelse 2023

Kjære medstudent! Hvordan trives du på medisinstudiet?
Dette er en spørreundersøkelse for å kartlegge studentenes opplevelse av profesjonsstudiet i Bergen. Det er den andre trivselsundersøkelsen utført av medisinstudenter ved UiB. Den første ble gjort i 2012. I 2015 ble det innført et nytt studieprogram hvor bedring av studentopplevelsen var et hovedmål. Denne studien vil sammenlikne dagens status med studentenes opplevelse av studiet i 2012, og vurdere om opplevelsen av medisinstudiet i 2023 samsvarer med målene for det nye studieprogrammet.

Alle svar avgitt i undersøkelsen er anonyme.

Dataene vil brukes i hovedoppgave på medisinstudiet.

Hilsen Emilie Sandve Aase, Kull 18B

Personalia

Kull

(10) ❍ 22

(0) ❍ 21

(2) ❍ 20

(3) ❍ 19B

(6) ❍ 19A

(7) ❍ 18B

(8) ❍ 18A

(4) ❍ 17B

(9) ❍ 17A

Alder

_____

Kjønn

(1) ❍ Kvinne

(2) ❍ Mann

(3) ❍ Ikke-binær/annet

Undervisning

1 = helt uenig og 5 = helt enig

Forelesningene lykkes i å trekke de store linjene gjennom pensum og gir gode forståelsesknagger

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Undervisningen gir meg motivasjon til å fortsette studiet

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg blir sittende i forelesning selv om jeg synes det er en dårlig forelesning

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Studiet burde inkludere mer digital undervisning og/eller hybrid undervisning

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Autonomi

1 = helt uenig og 5 = helt enig

Studieprogrammet gir meg friheten til å strukturere min egen studiehverdag slik at jeg kan studere slik jeg lærer best

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg bruker det meste av min tid på studiet

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg har lite energi/tid til fritidsaktiviteter

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Eksamen

1 = helt uenig og 5 = helt enig

Jeg opplever eksamener som stressende

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg opplever uro for eksamen utenfor eksamensperioden

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Eksamen er for detaljfokusert

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Mestring

1 = helt uenig og 5 = helt enig

Jeg opplever generell god mestringsfølelse av studiet

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Innsatsen studieprogrammet krever er rimelig (tidsbruk, pensum, arbeidsinnsats)

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg anser meg selv som en perfeksjonist

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Sosialt

1 = helt uenig og 5 = helt enig

Jeg er sammen med mine medstudenter på fritiden

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg snakker med mine medstudenter om personlige tanker og problemer

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg føler meg som et medlem av en fast vennegjeng på kullet mitt

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Tilhørighet

1 = helt uenig og 5 = helt enig

Det tilrettelegges for medvirkning og innspill fra studentene (STUND, tillitsvalg, studentbarometer, semestervurdering skjema)

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Studentenes innspill blir fulgt opp av institusjonen og gir resultater

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Min trivsel og mentale helse prioriteres av studieprogrammet

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Velferd

1 = helt uenig og 5 = helt enig

Medisinstudiet skal være vanskelig og krevende

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg føler meg utbrent fra studiet

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg har blitt mer apatisk/kynisk mot andre enn før jeg start studiet.

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5

Jeg er stort sett nedstemt/blid

(1) ❍ Stort sett nedstemt (2) ❍ 2 (7) ❍ 3 (4) ❍ 4 (5) ❍ Stort sett blid

Jeg er stort sett trett og sliten/sterk og opplagt?

(3) ❍ Trett og sliten (4) ❍ 2 (5) ❍ 3 (6) ❍ 4 (7) ❍ Sterk og opplagt

I løpet av den siste måneden har du ofte følt deg nedstemt, depressiv, håpløs?

(1) ❍ Ja

(2) ❍ Nei

I løpet av den siste måneden har du ofte følt på likegyldighet og tap av interesse for å gjøre ting?

(1) ❍ Ja

(2) ❍ Nei

Totalt sett, din mentale, fysiske og emosjonelle livs kvalitet den siste måneden 1 = Lavest, 10 = høyest

(1) ❍ 1 (2) ❍ 2 (3) ❍ 3 (4) ❍ 4 (5) ❍ 5 (6) ❍ 6 (7) ❍ 7 (8) ❍ 8 (9) ❍ 9 (10) ❍ 10

HAR DU PÅ ET ELLER FLERE TIDSPUNKT, I EN PERIODE AV MINST 2 UKER, KJENT PÅ:

Opplevd i studiet

- [ ] Utmattelse
- [ ] Angst
- [ ] Isolasjon
- [ ] Svekket hukommelse
- [ ] Uvanlig konsentrasjonsvansker
- [ ] Unormalt irritable, kort lunte
- [ ] Tap av engasjement for fritidsaktiviteter
- [ ] Uvanlig prokrastinering av daglige gjøremål
- [ ] Sovet periodevis mer enn vanlig
- [ ] Sovet periodevis mindre enn vanlig
- [ ] Bruk av alkohol/andre stoffer for å slappe av eller koble av
- [ ] Periodevis hjertebank
- [ ] Uforklarlig magesmerter eller hodepiner

HAR DU PÅ ET ELLER FLERE TIDSPUNKT, I EN PERIODE AV MINST 2 UKER, KJENT PÅ:

Opplevd FØR studiet

- [ ] Utmattelse
- [ ] Angst
- [ ] Isolasjon
- [ ] Svekket hukommelse
- [ ] Uvanlig konsentrasjonsvansker
- [ ] Unormalt irritable, kort lunte
- [ ] Tap av engasjement for fritidsaktiviteter
- [ ] Uvanlig prokrastinering av daglige gjøremål
- [ ] Sovet periodevis mer enn vanlig
- [ ] Sovet periodevis mindre enn vanlig
- [ ] Bruk av alkohol/andre stoffer for å slappe av eller koble av
- [ ] Periodevis hjertebank
- [ ] Uforklarlig magesmerter eller hodepiner

Avsluttende spørsmål

Har du noen gang vurdert å slutte på studiet?

(1) ❍ Ja

(2) ❍ Nei

Ville du anbefalt medisinstudiet i Bergen til potensielle medisinstudenter?

(1) ❍ Ja

(3) ❍ Usikker

(2) ❍ Nei

Takk for din deltakelse

Jeg vil gjerne ha utfyllende kommentarer eller relevante erfaringer fra studiet som kan utfylle spørsmålene i denne undersøkelsen. Det vil derfor også bli postet en oppfølgingsundersøkelse på ditt kulls Facebook side innen kort tid med mulighet for kommentarer.
Spørsmål og andre henvendelser kan sendes til emilie.sandveaase@gmail.com

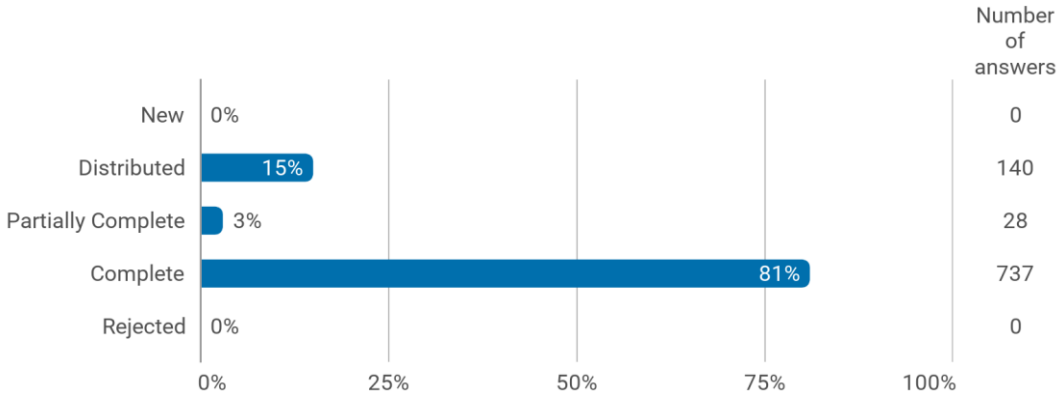
Alle svar avgitt i undersøkelsen er anonyme.

Dataene vil brukes i hovedoppgave på medisinstudiet, og resultatene vil bli gjort tilgjengelige for medisinstudenter.

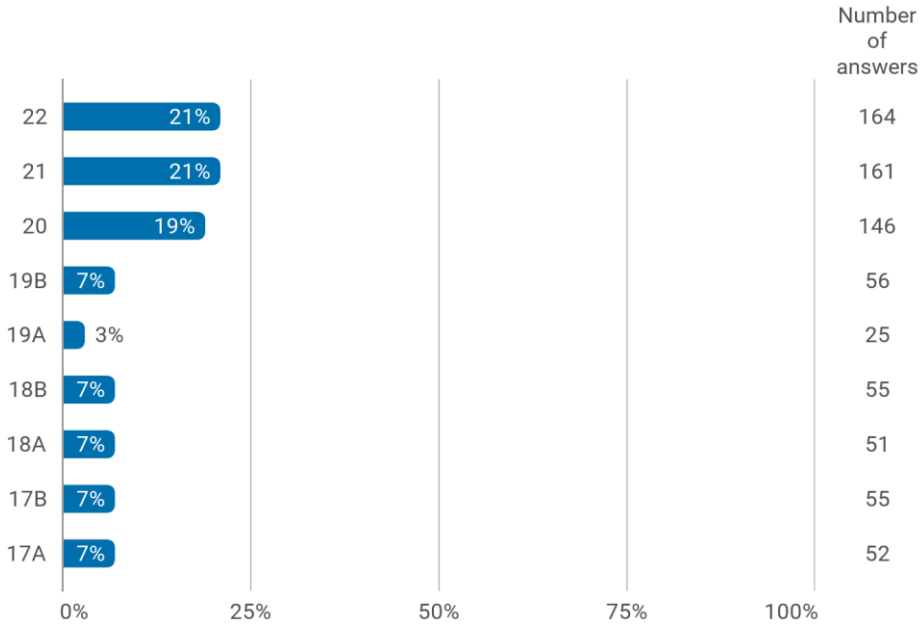
Hilsen Emilie Sandve Aase, kull 18B
Veiledere: Professor Edvin Schei og stipendiat Eivind Valestrand

Samlet student besvarelser

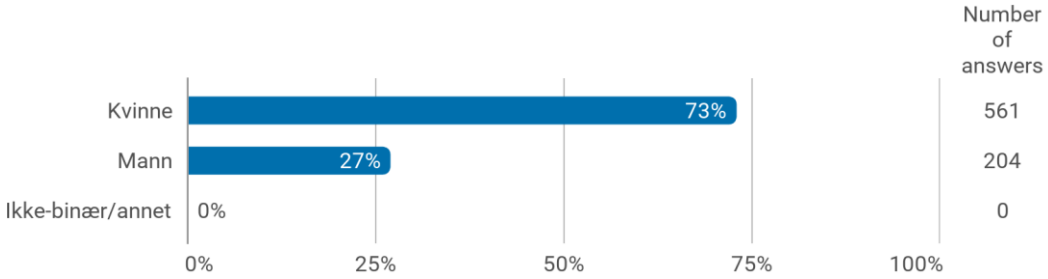
Overall Status



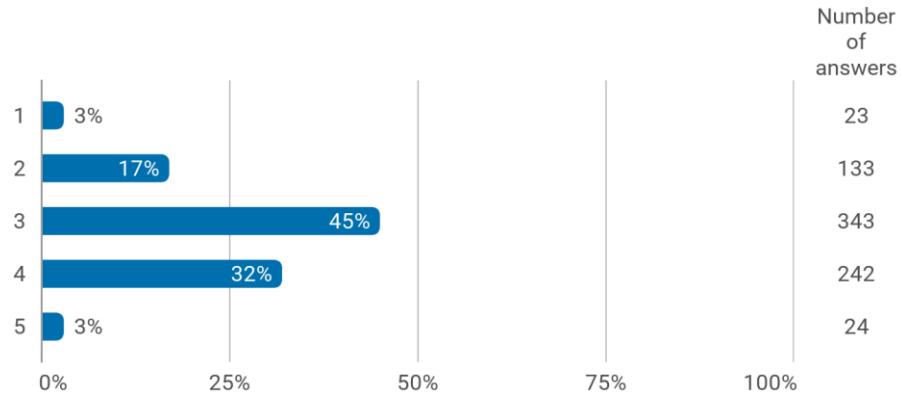
Kull



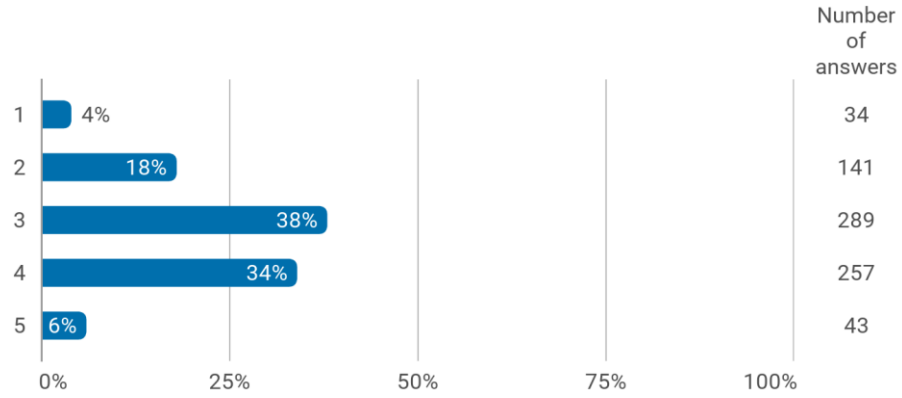
Kjønn



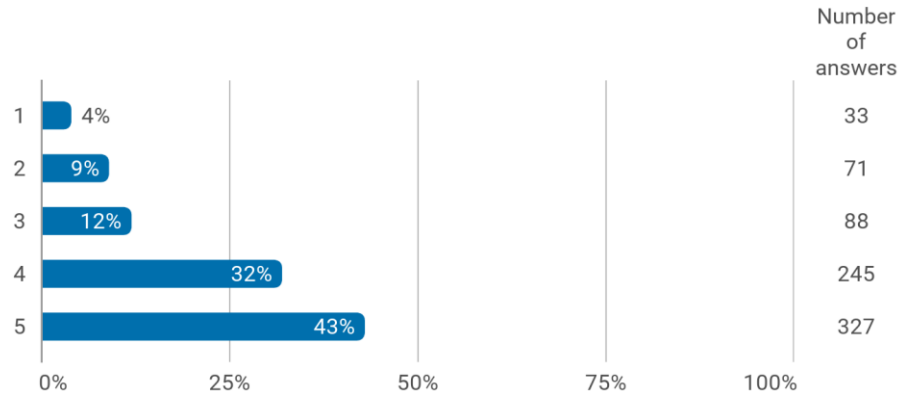
Forelesningene lykkes i å trekke de store linjene gjennom pensum og gir gode forståelsesknagger



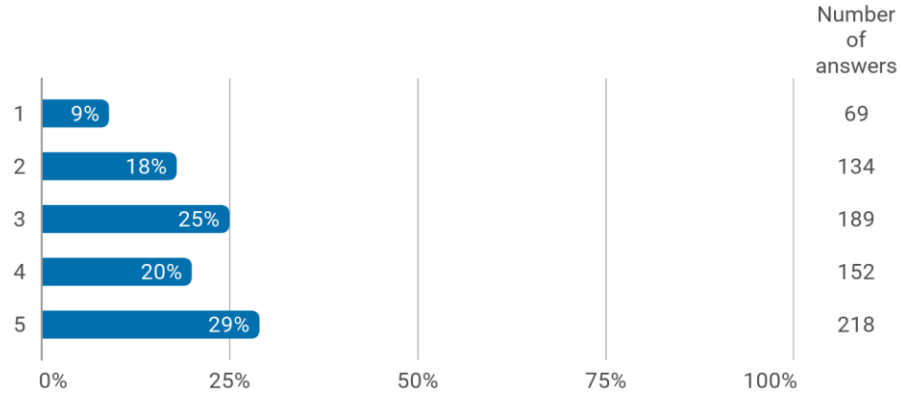
Undervisningen gir meg motivasjon til å fortsette studiet



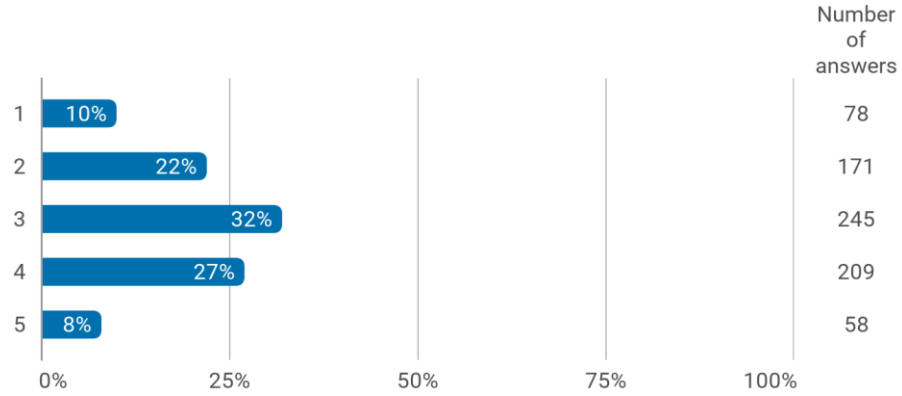
Jeg blir sittende i forelesning selv om jeg synes det er en dårlig forelesning



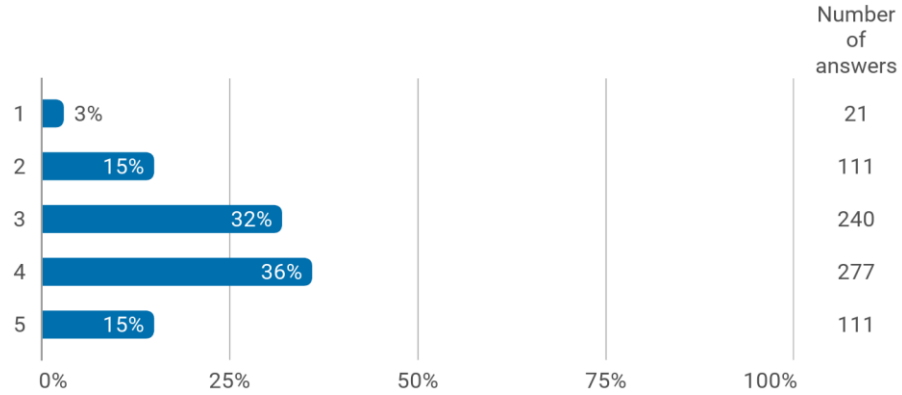
Studiet burde inkludere mer digital undervisning og/eller hybrid undervisning



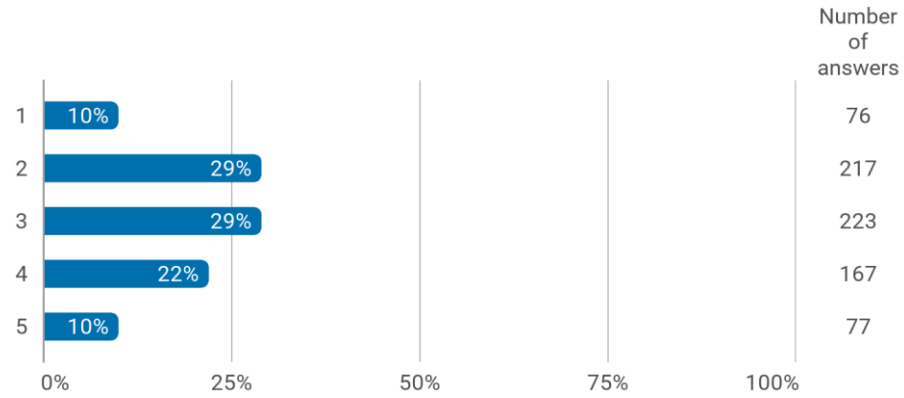
Studieprogrammet gir meg friheten til å strukturere min egen studiehverdag slik at jeg kan studere slik jeg lærer best



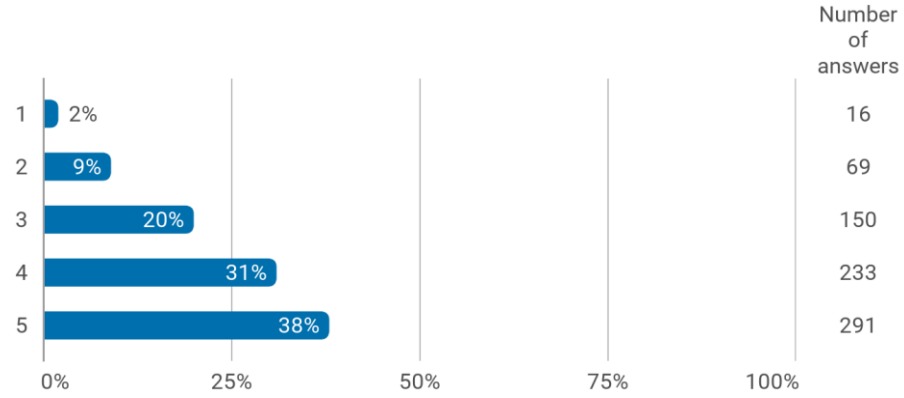
Jeg bruker det meste av min tid på studiet



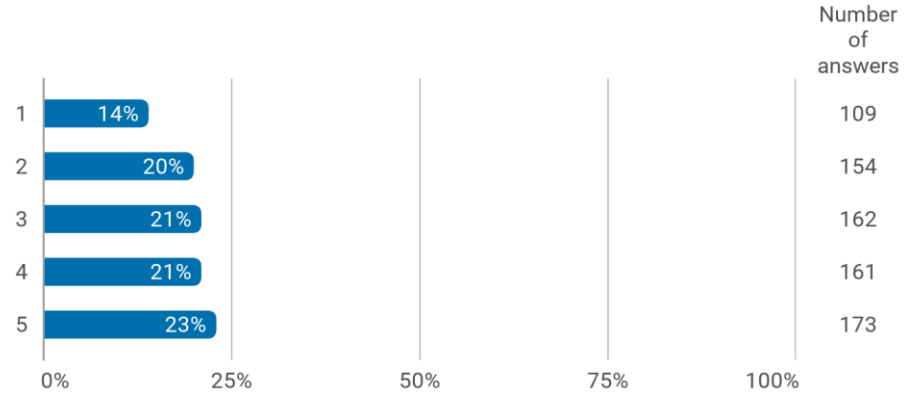
Jeg har lite energi/tid til fritidsaktiviteter



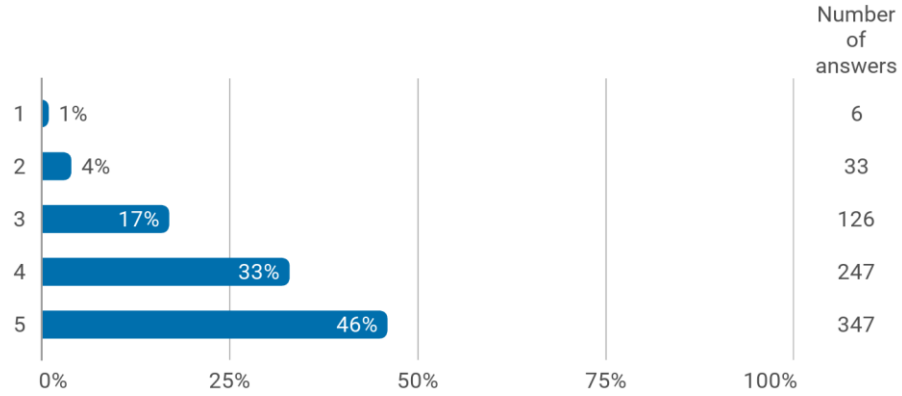
Jeg opplever eksamener som stressende



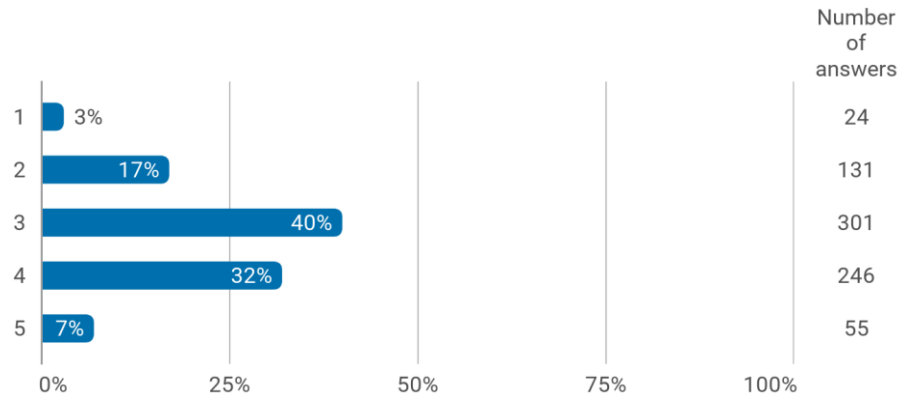
Jeg opplever uro for eksamen utenfor eksamensperioden



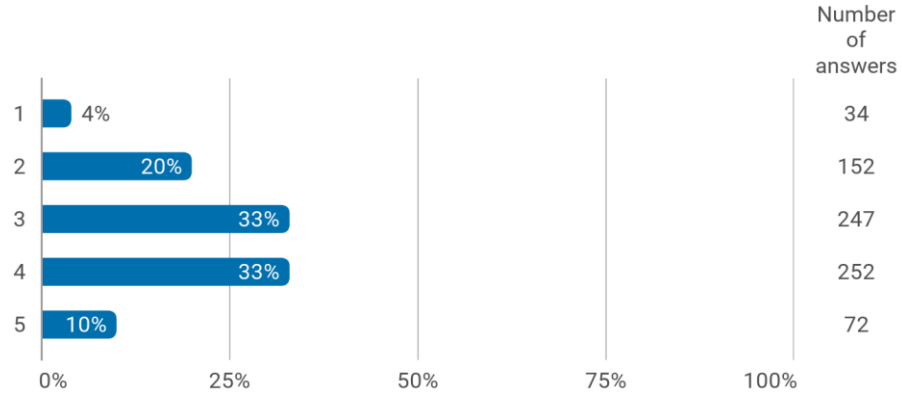
Eksamen er for detaljfokusert



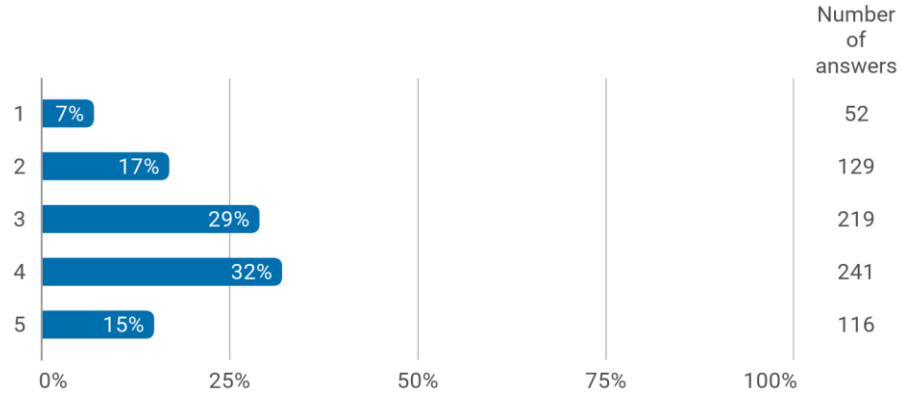
Jeg opplever generell god mestringsfølelse av studiet



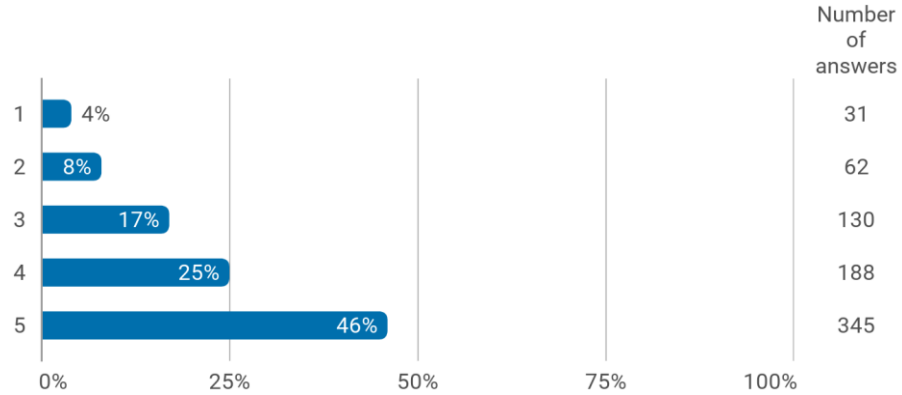
Innsatsen studieprogrammet krever er rimelig (tidsbruk, pensum, arbeidsinnsats)



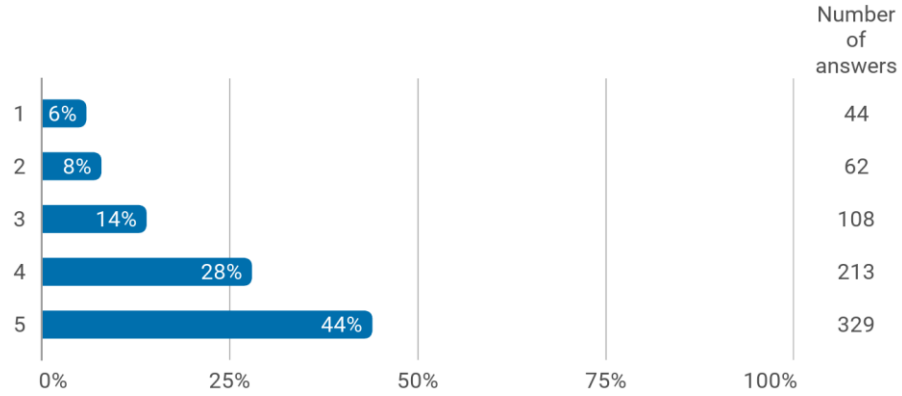
Jeg anser meg selv som en perfeksjonist



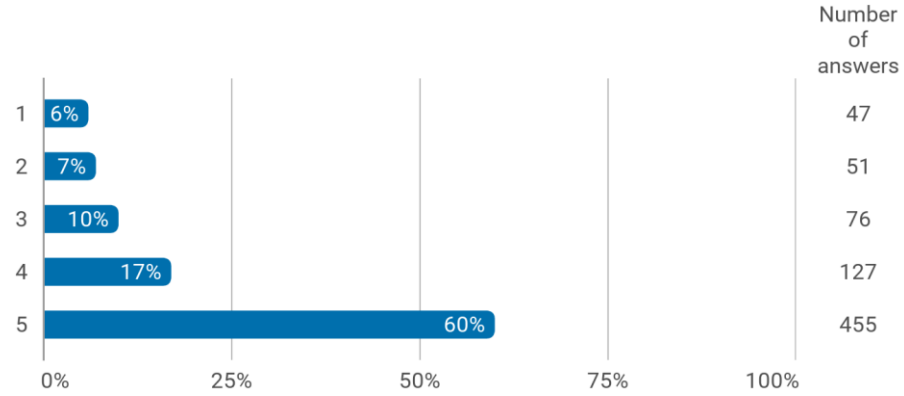
Jeg er sammen med mine medstudenter på fritiden



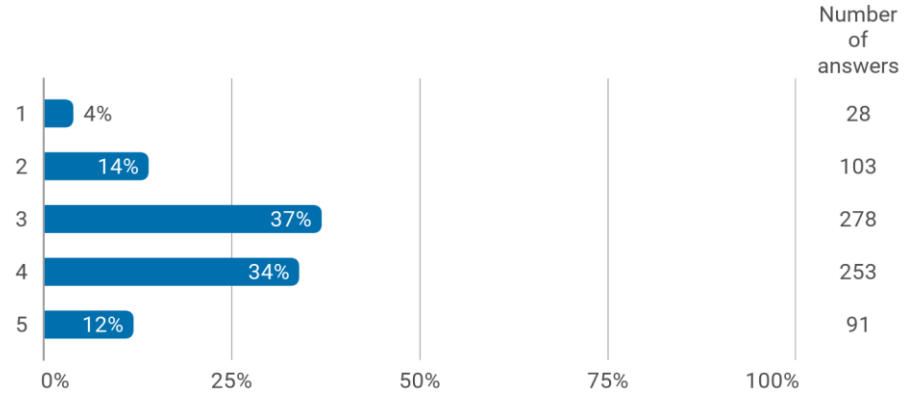
Jeg snakker med mine medstudenter om personlige tanker og problemer



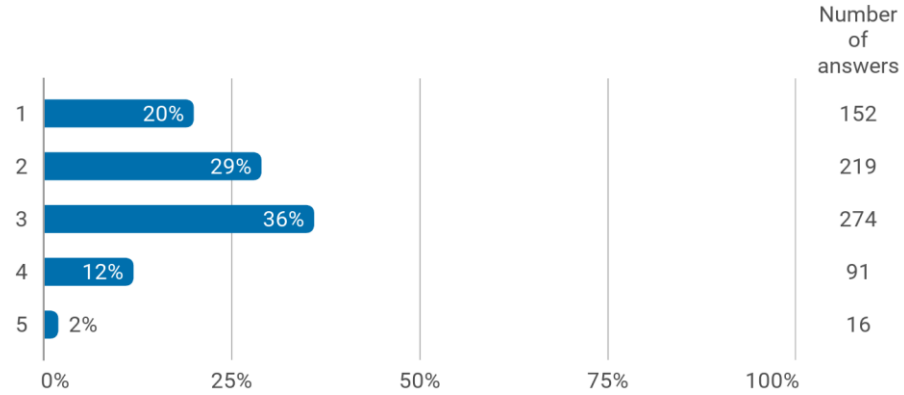
Jeg føler meg som et medlem av en fast vennegjeng på kullet mitt



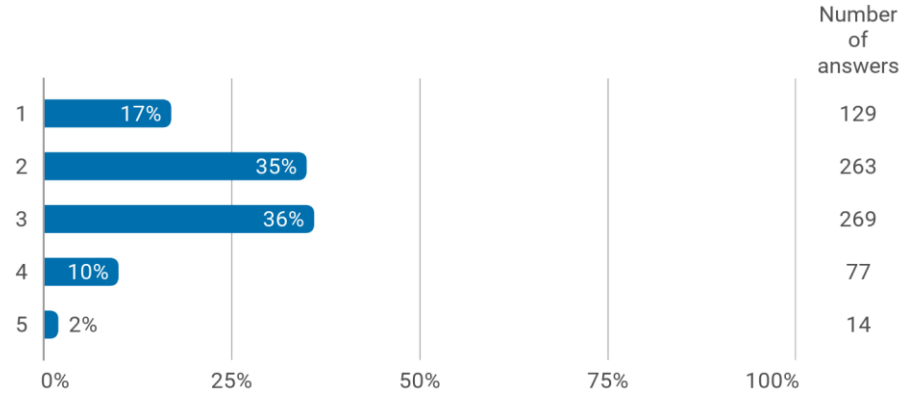
Det tilrettelegges for medvirkning og innspill fra studentene (STUND, tillitsvalg, studentbarometer, semestervurdering skjema)



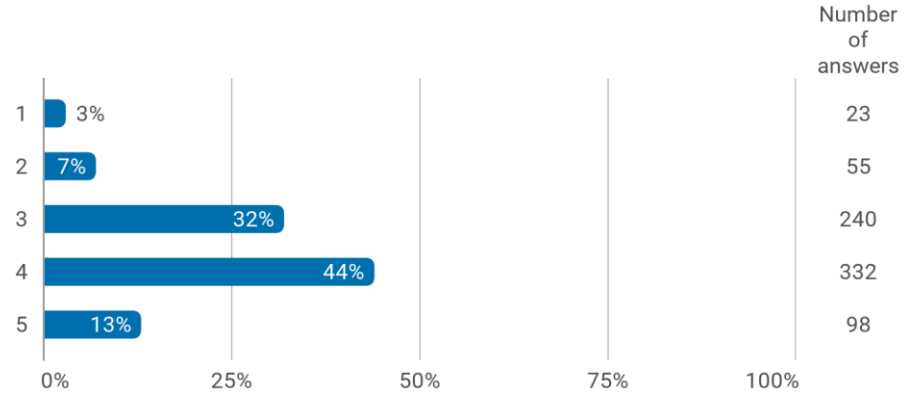
Studentenes innspill blir fulgt opp av institusjonen og gir resultater



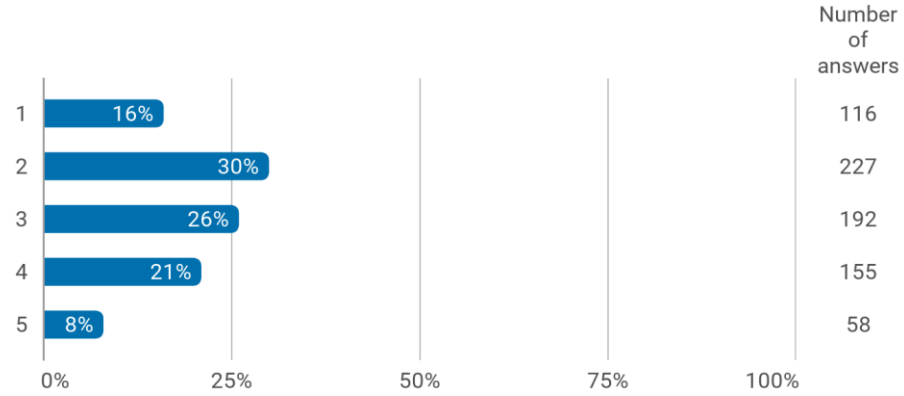
Min trivsel og mentale helse prioriteres av studieprogrammet



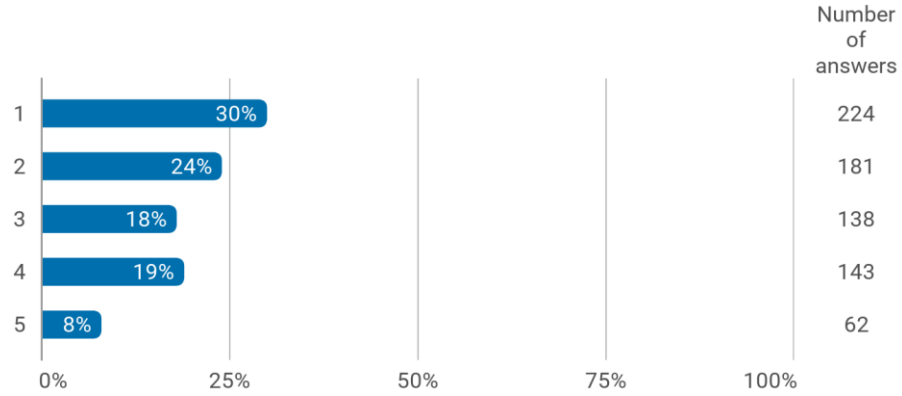
Medisinstudiet skal være vanskelig og krevende



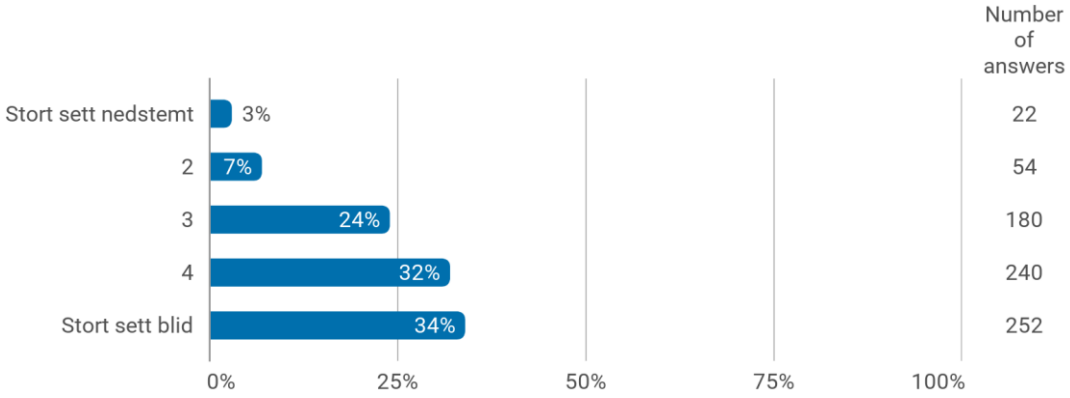
Jeg føler meg utbrent fra studiet



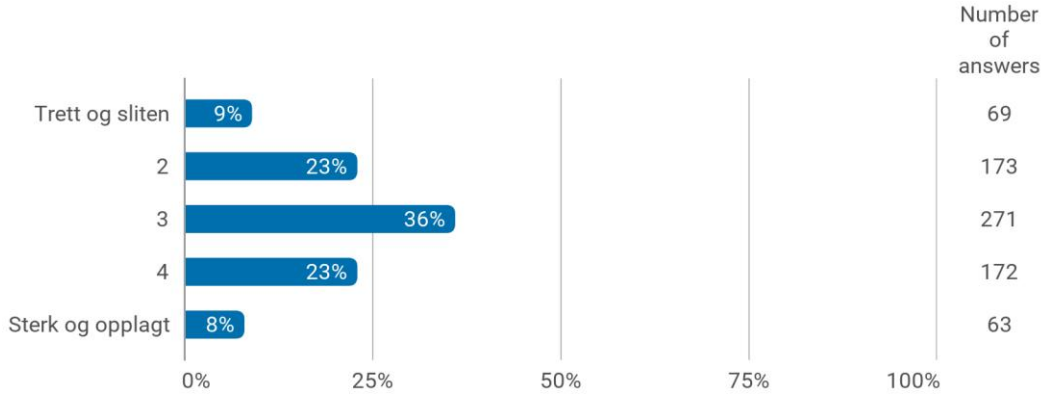
Jeg har blitt mer apatisk/kynisk mot andre enn før jeg start studiet.



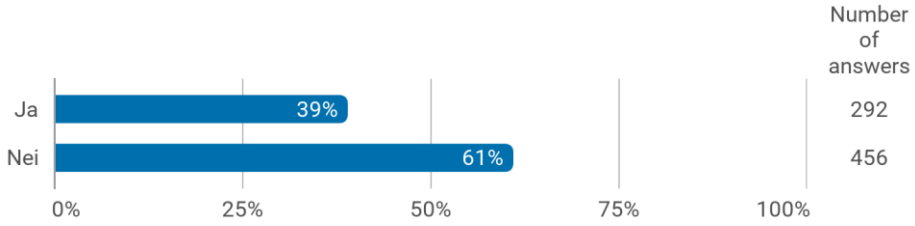
Jeg er stort sett nedstemt/blid



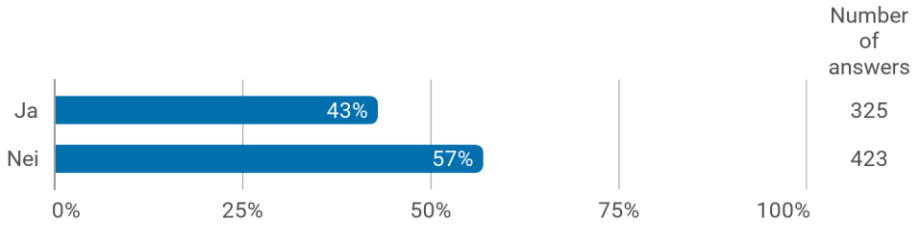
Jeg er stort sett trett og sliten/sterk og opplagt?



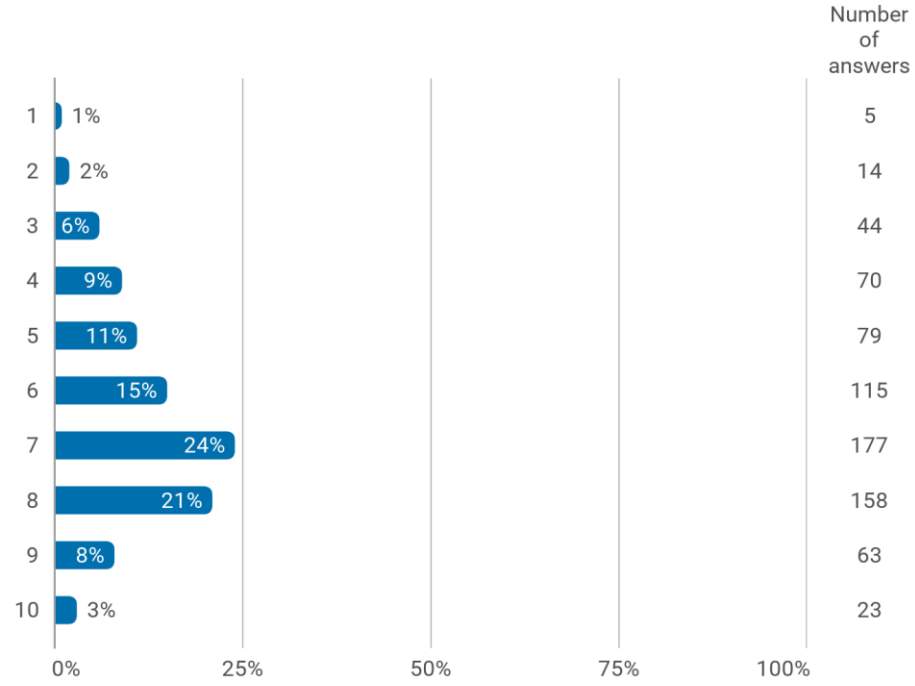
I løpet av den siste måneden har du ofte følt deg nedstemt, depressiv, håpløs?



I løpet av den siste måneden har du ofte følt på likegyldighet og tap av interesse for å gjøre ting?

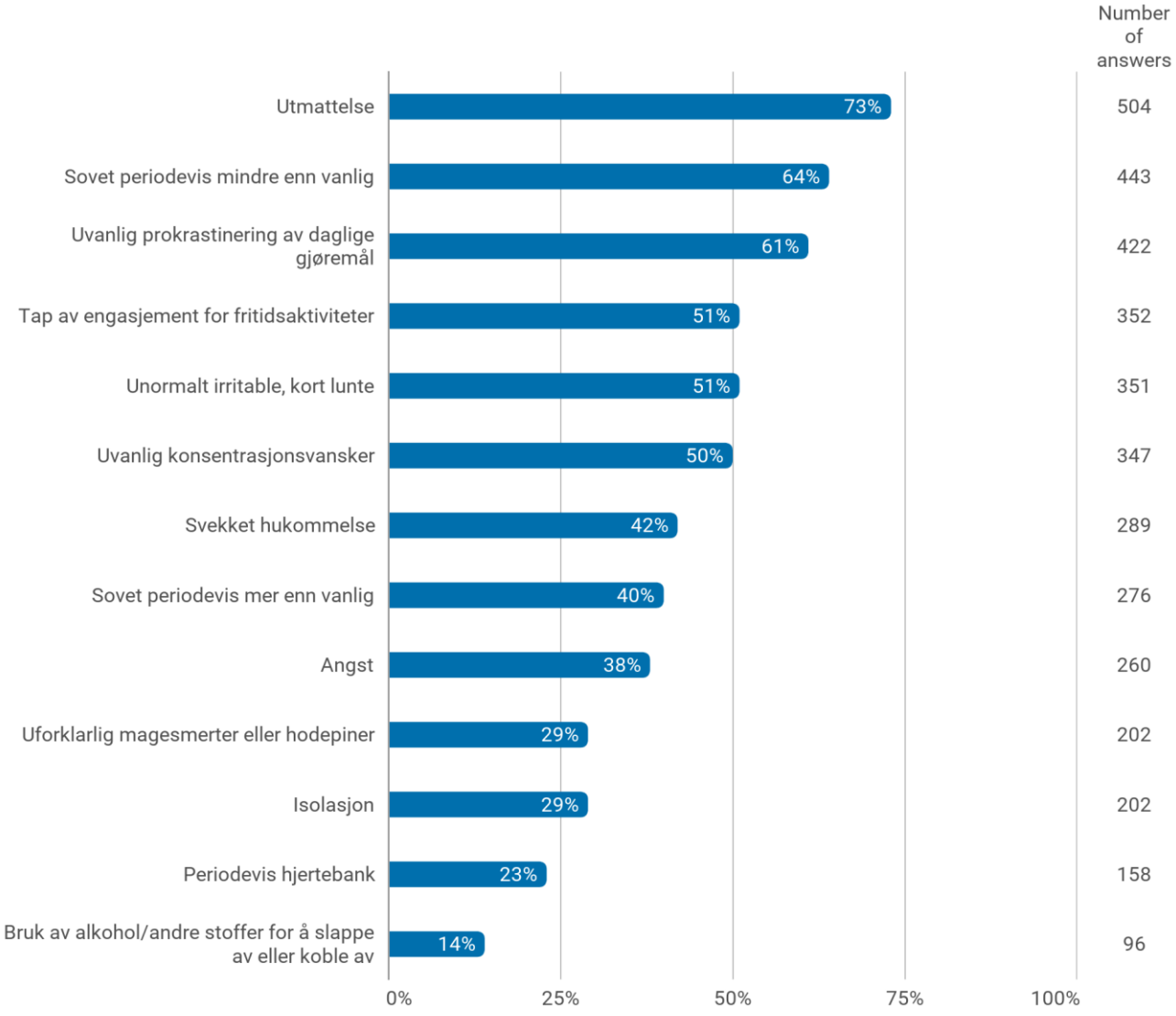


Totalt sett, din mentale, fysiske og emosjonelle livs kvalitet den siste måneden
1 = Lavest, 10 = høyest



Har du på et eller flere tidspunkt, i en periode av minst 2 uker, kjent på:

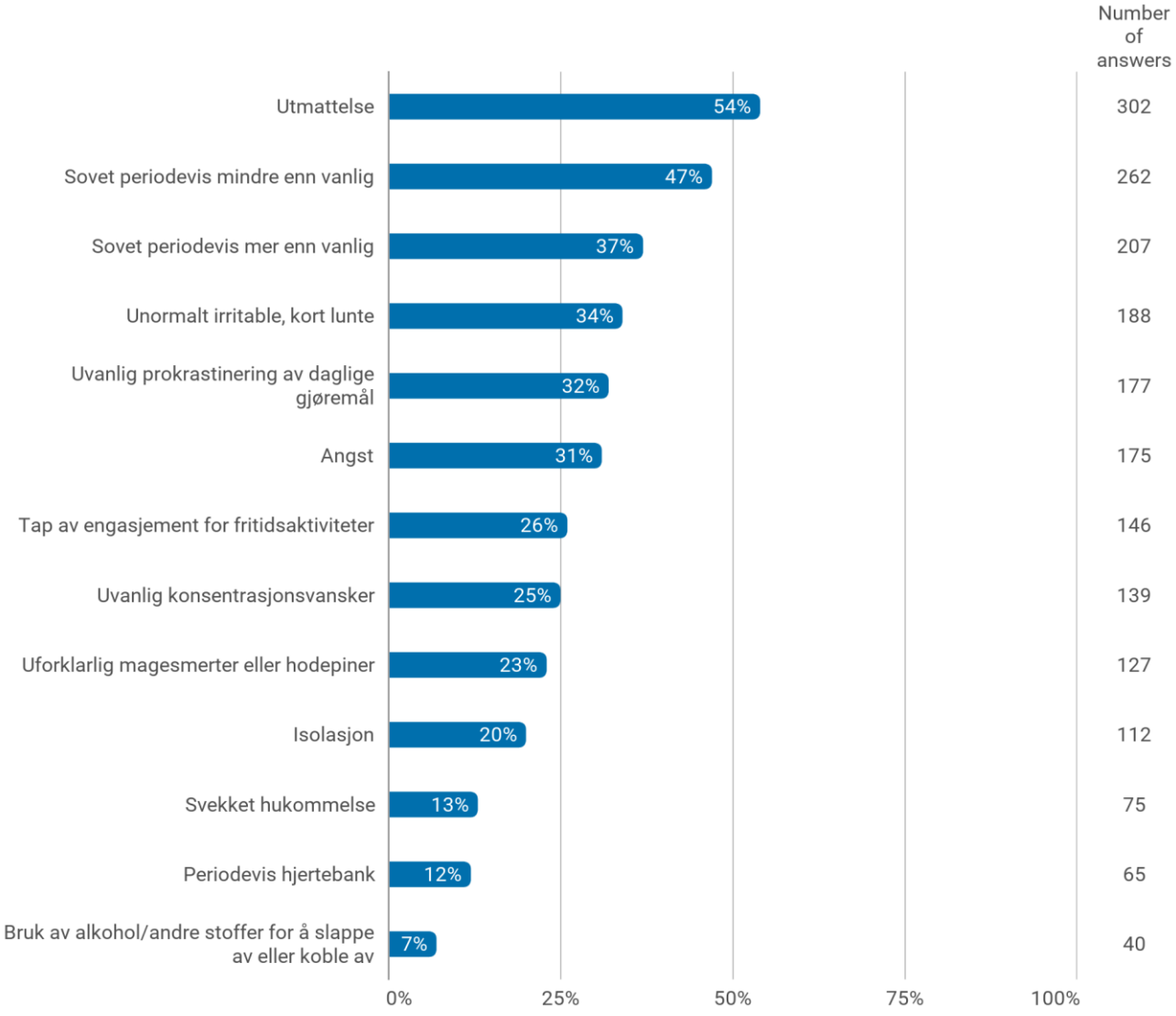
Opplevd i studiet



Total answering participants: 688

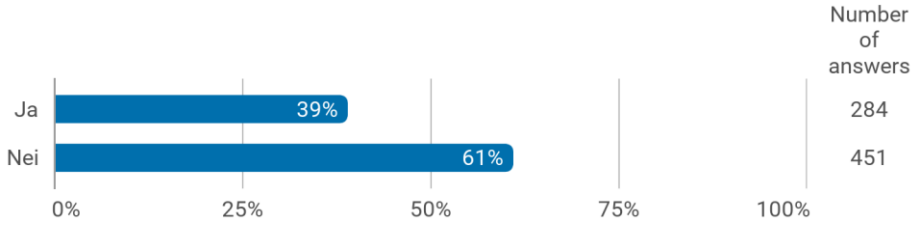
Har du på et eller flere tidspunkt, i en periode av minst 2 uker, kjent på:

Opplevd FØR studiet

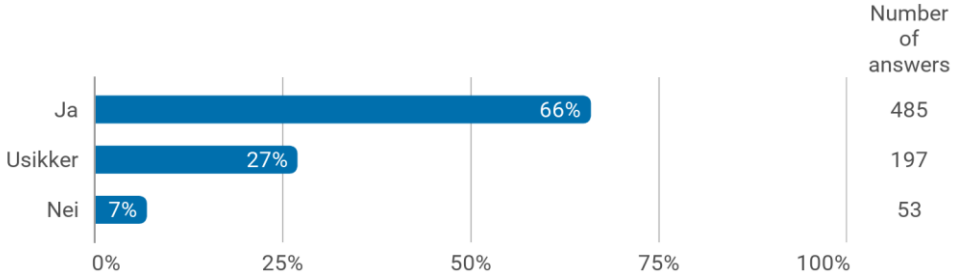


Total answering participants: 560

Har du noen gang vurdert å slutte på studiet?



Ville du anbefalt medisinstudiet i Bergen til potensielle medisinstudenter?



Student Kommentar Besvarelser

Sitater i teksten

Nedenfor presenteres student kommentarene brukt i teksten i sitt originalformat og i kronologisk rekkefølge.

Fra WB23

Studieprogrammet gir frihet til å strukturere egen studiehverdag, dersom man er villige til å «gå glipp av» undervisning.

Jeg bruker så godt som all min tid på studiet, og føler ikke jeg kan strukturere studiedagen etter metoder som erfaringsmessig gir meg den beste læringen. Det er ikke tid til det.

Jeg har DEFINITIVT blitt mer både apatisk og kynisk, som er effektivt, men litt kjipt

Det tilrettelegges for inspill, men har ila mine 4 år på studiet ikke opplevd at studieseksjonen tar det til seg på noen måte, eller er åpen for endring

Ofte brukar eg størstedelen av timane eg er vaken på å lese. Eg opplever ikkje at det er mogleg for meg å drive med nokon fritidsaktivitetar, både på grunn av at eg ikkje har tid og fordi eg bruker all energi på å lese. Mange seier at studietida er den beste tida i livet, for min del er det den verste eg har opplevd så langt.

Mengden forelesninger er for stor, samtidig som jeg ofte synes innholdet ikke er dekkende for kunnskapsnivået som er ønskelig. Dermed ender vi med å bruke store mengder tid på forelesning for så å innse at man uansett må sette av tid til egenstudier for å oppnå dybden og forståelsen som kreves. Det skaper enorme mengder merarbeid i en allerede travel hverdag. Jeg har ofte ikke tid til å repetere før eksamen fordi jeg ikke har kommet gjennom fagstoffet.

Jeg har eksamen i starten av juni men slet med å sove i går natt (16.april) fordi jeg er stresset for å rekke over pensum.

I eksamensperioden stopper hele livet mitt opp. Jeg leser ofte til jeg begynner å gråte, og plukker bøkene opp igjen når jeg har tatt meg sammen. Mannen min ender med eneansvar for vårt hushold. Jeg sover dårlig og må bruke alarmer på telefonen for å huske å spise.

Utbrenthetsgraden er ganske høy gjennomgående. Føler press for å fortsette om sommeren for å huske det som allerede er lært.

Andre utvalgte sitater

Forelesningene lykkes i å trekke de store linjene gjennom pensum og gir gode forståelses knagger.

Undervisningen gir meg motivasjon til å fortsette studiet

Jeg blir sittende i forelesning selv om jeg synes det er en dårlig forelesning

Studiet burde inkludere mer digital undervisning og/eller hybrid undervisning.

Det medisinske fakultet burde virkelig forstår at studenter lærer på forskjellige måter, og at ikke alle lærer ved å sitte i ro i en sal i flere timer. ….Det er bare så trist at forelesere/fakultetet ikke tar i bruk teknologien som er der, slikt at studenter har flere muligheter til å få med undervisninger.

Av respekt for foreleseren blir de fleste sittende igjen om man først har møtt opp.

Vi går beskjed om at det er forelesninger som er pensum, ikke pensumlitteratur, men forelesningene blir verken streamet eller tatt opp. (….)

Som regel syns eg at forelesningane gjør alt anna enn å trekke store linjer. Det er meir enn noko anna eit stort detaljfokus.(…)

(….) Samtidig er det heller ikke lett å finne motivasjon til å lese selv på dagen siste fag etter 7 timer med forelesning før dette. Om men isåfall setter seg ned går det stort sett inn det ene øret og ut det andre.

Studieprogrammet gir meg friheten til å strukturere min egen studiehverdag slik at jeg kan studere slik jeg lærer best

Jeg bruker det meste av min tid på studiet

Jeg har lite energi/tid til fritidsaktiviteter

I enkelte perioder kan jeg bruke 10-13t daglig på studiet og lesing som selvfølgelig går utover fritidsaktiviteter og relasjoner.

Liten tid til overs. Mye lesing, mye obligatorisk, må også være det men det er rigiditet og liten fleksibilitet som kan gjøre det vanskelig for mange studenter, spesielt de som sliter

Jeg tror at første året på medisinstudiet har dratt meg så langt ned psykisk at jeg ikke har orket noe som helst.

Her savner jeg mer godvilje og forståelse for at vi har oppmøteplikt på andre viktige arenaer (feks jobb). Dette skaper en dårlig «relasjon» til studieseksjonen som jeg håper i flere sammenhenger kunne sett det «store bildet» og at vi har et liv utenom der kabalen skal gå opp med studiet.

Jeg opplever eksamener som stressende

Jeg opplever uro for eksamen utenfor eksamensperioden

Eksamen er for detaljfokusert

Føler det er mye pensum, og jeg stresser mye generelt

Eksamen og vurderingssituasjoner er noe jeg tidligere alltid har vært veldig komfortable med. Men med eksamensformen på UiB, og hvor vilkårlig noen av oppgavene kan være har eksamen blitt et gigantisk stressmoment for min del. Jeg føler at det alltid kommer noen oppgaver som er veldig veldig rare og ikke reflekterer det vi har lært i løpet av undervisningen.

Må prioritere små detaljer når man leser til eksamen, i steden for å fokusere på forståelse

Jeg hater MCQ. Så langt føler jeg ikke det har blitt testet forståelse en eneste gang, kun unødvendig detaljfokus. (…)

Eksamen inneholder ofte detaljspørsmål om diagnoser som er svært sjeldne. Dette kan virke mot sin hensikt da studenter må pugge detaljer som de kommer til å glemme og kanskje aldri se i klinisk setting, i stedet for å studere grunnleggende prinsipper, vanlige diagnoser og undersøkelsesmetoder.

Jeg opplever generell god mestringsfølelse av studiet

Innsatsen studieprogrammet krever er rimelig (tidsbruk, pensum, arbeidsinnsats)

Jeg anser meg selv som en perfeksjonist

Folk går nervøse i tre uker før sensur og tviler sterkt på egne ferdigheter, selv om de har 13 år skolegang bak seg med gode resultater. Dette synes jeg peker på at studiet og studieprogrammet ikke har nok fokus på å bygge faglig selvsikkerhet og trygge leger. (Det handler ikke om å være hovmodig eller ovenpå.) Men derimot skaper usikre leger som tviler på egne evner.

Av og på med mestringsfølelse, varierer med følelsen av likegyldighet.

Jeg opplevde svært lite mestring i studiet før praksis i MED8. Det var først etter den at jeg innså at jeg faktisk har lært litt i løpet av studiet, og kan være til nytte. Før det var det et endeløst jag og følelsen av at kunnskapen aldri festet seg. Jeg er nok ganske perfeksjonistisk av meg, men forsøker å jobbe med dette da jeg innser at det hemmer meg mer enn det tjener meg.

Jeg er sammen med mine medstudenter på fritiden

Jeg snakker med mine medstudenter om personlige tanker og problemer

Jeg føler meg som et medlem av en fast vennegjeng på kullet mitt

Tror de fleste studenter snakker sammen om hvordan vi har det på studiet. Mange føler kanskje at vi forstår hverandres hverdag og stress, mens det for utenforstående kan være vanskelig å forstå hvordan et studie kan ta så mye tid

Føler kullet var veldig lett å bli kjent med og har i tillegg til en fast vennegjeng også blitt godt kjent med mange andre på kullet gjennom tildelte grupper i undervisningen, studentorganisasjoner og samtaler

Det sosiale livet er blitt betydelig redusert etter å ha begynt på studiet. Det meste dreier seg i så fall om studiet. Dette fører til stress og utbrenthet. Det er liten tid til overs til ikke-studierelaterte aktiviteter

Det tilrettelegges for medvirkning og innspill fra studentene (STUND, tillitsvalg, studentbarometer, semestervurdering skjema)

Studentenes innspill blir fulgt opp av institusjonen og gir resultater

Min trivsel og mentale helse prioriteres av studieprogrammet.

for min del stemmer ikke sistnevnte i det hele tatt. jeg har aldri vært så langt nede.

STUND er veldig gode men det blir jo ikke tatt til vurdering av fakultetet. Min trivsel prioriteres lite av studieprogrammet. Jeg føler de jobber litt mot deg.

I forhold til min egen mentale helse er ikke det noe jeg har tatt opp med fakultetet, usikker på om det er greit å slite mens man får på studiet.

Jeg får ikke inntrykk av at studieprogrammet har noe form for fokus på studentenes trivsel eller mentale helse.

Det virker som ikke fakultet skjønner at vi har et liv ved siden av studiet noen ganger, og endrer på klokkeslett og dager med oppsatt undervisning.

Medisin studiet skal være vanskelig og krevende

Jeg føler meg utbrent fra studiet

Jeg har blitt mer apatisk/kynisk mot andre enn før jeg start studiet.

Jeg er stort sett nedstemt/Blid

Føler du deg stort sett trett og sliten/sterk og opplagt?

Eg er heilt einig i at medisinstudiet skal vere vanskeleg reint fagleg, men å ha det vanskeleg på privaten på grunn av studiet blir ein annan sak.

Jeg har vært depressiv etter jeg begynte på medisinstudiet og vurderer å slutte pga mental helse

Jeg er stort sett blid, men kan bli nedstemt når jeg tenker på eksamen og hvor lite tid jeg får til trening og andre ting jeg vil

Alltid trøtt, kunne sovet hele dagen og natta om jeg hadde tid

I løpet av den siste måneden har du ofte følt deg nedstemt, depressiv, håpløs?

I løpet av den siste måneden har du ofte følt på likegyldighet og tap av interesse for å gjøre ting?

Total sett, din mentale, fysiske og emosjonelle kvalitet i livet den siste måneden

Jeg føler av og til på likegyldighet og en slags apati for ting. Ikke bare skole, men generelt o dagliglivet

Medisinstudiet har gitt meg klinisk depresjon som jeg er i medikamentell og samtalebasert behandling for.

Har vært deprimert under deler av studiet, også klinisk relevant. Utbrenthetsgraden er ganske høy gjennomgående. Føler press for å fortsette om sommeren for å huske det som allerede er lært. For liten oppfølging og stor grad av utbrenthet generelt sett

Har du på et eller flere tidspunkt, i en periode av minst 2 uker, kjent på:

Utmattelse, Angst, Isolasjon, Uvanlig konsentrasjonsvansker, Svekket hukommelse, Unormalt irritable/kort lunte, Tap av engasjement for fritidsaktiviteter, Uvanlig prokrastinering av daglige gjøremål, Sover periodevis mer enn vanlig, Sover periodevis mindre enn vanlig, Bruk av alkohol/andre stoffer for å slappe av eller koble av, Periodevis hjertebank, Uforklarlig magesmerter eller hodepiner

Veldig rart, har tidligere kunne sittet timevis og vært 100% konsentrert, og lært/husket store deler av det jeg har lest om, selv ved andre høyere utdanningsinstitusjoner i Norge. På medisin sliter jeg både mye med hukommelse og konsentrasjon, uten at jeg er klar over hva det kommer av.

Jeg har følte meg sliten og tiltaksløs, men det hjalp å få psykologtime og ha fri i påsken.

Ja, utmattet, sover dårlig, konsentraskonsvansker, hodepine hver dag, bruker melatonin for å sove, mye irritert og stressa, svekket hulommelse, hjertebank, ikke tap av engasjement for fritidsaktiviteter men lei meg for at jeg ikke føler jeg har tid og kan kose meg med dem.

Har du noen gang vurdert å slutte på studiet?

Ville du anbefalt medisinstudiet i Bergen til potensielle medisinstudenter?

Vil ikke anbefale bergen, det er for mange dårlige forelesere

Har aldri vurdert å slutte, men har veldig ofte tenkt at jeg ikke er egnet fordi jeg ikke takler presset.

Eg har aldri vurdert å slutte på studiet, sjølv om studiekvardagen kan vere meir eller mindre miserabel. Eg har jobba alt for hardt mot å kome inn på studiet til å slutte.

Medisin i Bergen? Neppe. Kanskje om du hadde særgrunn til at det måtte bli Bergen. Kanskje Norges mest konservative fakultet, irriterende. Hadde jeg bare visst...

Andre kommentarer, eksempler eller erfaringer

Professor som sier til studentene på begynnelsen av året at vi må være ett av de dårligste kullene. I tillegg så er det viktig at alle kommer på forelesninger, hvis ikke stryker man, men man må også belage seg på at det kommer ting på eksamen som ikke har kommet i forelesning. Og så er det viktig å ikke stille dumme spørsmål i forelesning.

Jeg opplever timeplanen som rotete og at det er mye obligatorisk undervisning/TBL som er tidkrevende som jeg får lite ut av.

UNIVERSITETET I BERGEN
Det medisinske fakultet

Arkivkode:	**Programutvalg medisin**
Sak nr.: 6/24	Møte: 17.04.24

Drøfting: Søylene i medisinstudiet – Akademisk søyle og profesjonalitetssøylen

Redegjørelse til PUM med status presens og forslag til vedlikehold og fornyelse av søylene.

De to søylene i medisinstudiet skal ivareta vesentlige lærings- og danningselementer som ikke kan ivaretas i tilstrekkelig grad innenfor de enkelte fag og kliniske emner, og hvor det er viktig med koordinert pedagogisk oppmerksomhet gjennom hele studiet. Erfaringen er at dette arbeidet er krevende, og bare deler av oppgavene er god nok ivaretatt. Raske samfunnsendringer i demografi og teknologi, som eldrebølge, bærekraftsutfordringer og kunstig intelligens, vil i årene fremover kreve omstillinger i legeutdanningen, med vekt på å styrke kandidatenes selvstendighet, akademiske dømmekraft, refleksjons- og problemløsningsevne, samarbeidsevner samt evne til å ivareta egen velferd og helse, altså egenskaper som går på tvers av medisinske fag.

Det blir nå noe utskifting i bemanningen av søylene, og begge søylene får nye ledere. Det er derfor behov for overføring og klargjøring av ansvar, med mulighet for forbedringer. Dette notatet beskriver søylenes oppgaver, hva som er ugjort, og hvordan lederne av søylene mener arbeidet kan kvalitetssikres i tiden fremover.

Bakgrunn
I studieplanen «Medisin 2015» er hovedinndelingen semestervis, slik at ett semester utgjør et emne med separat vurdering.

I tillegg til dette ble det etablert to langsgående strukturer, for å ivareta generell og allmenn kompetanse som skal ivaretas gjennom studiet:

- «Profesjonalitetssøylen» for å ivareta profesjonalitet; generell kompetanse til å fylle rollen som lege ut over det biomedisinsk kunnskapsmessige og sykdomsfaglige, og
- «Akademisk søyle» for å ivareta kunnskapshåndtering, akademisk/vitenskapelig tenkning og tilnærming til kunnskap vs. usikkerhet.

Begge søylene ledes av en komite, som skal følge og kvalitetssikre innholdet i søylene. Hovedoppgavene til søylene er beskrevet og publisert på nett, også i form av læringsmål:

Akademisk søyle
Informasjon:
https://www.uib.no/med/149816/akademisk-s%C3%B8yle
Læringsmål:
https://www.uib.no/med/149820/l%C3%A6ringsm%C3%A5l-akademisk-s%C3%B8yle

Hovedoppgaven:

En vitenskapelig holdning til kunnskap kjennetegner all undervisning i studiet. Akademisk søyle inneholder elementer som særlig synliggjør dette og stimulerer til læring av akademiske ferdigheter: Lesing og vurdering av litteratur, søking etter kilder og kritisk tenking. Akademisk skriving læres og trenes særlig gjennom hovedoppgaven, som er en viktig del av akademisk søyle.

Under Akademisk søyle ligger bl.a. følgende oppgaver:

- Ledelse og administrasjon av hovedoppgaven (emnet MEDOPPG)
- Støtte og koordinering av læringsaktiviteter opp mot kunnskapshåndtering (akademisk lesing og skriving, kildekritikk, forsknings- og publikasjonsetikk, database- og referansehåndtering)
- Støtte og koordinering av verktøyfag, slik som statistikk og epidemiologi

I RETHOS (Forskrift om nasjonal retningslinje for medisinutdanning) kapittel 7 (§§ 19-21) er følgende krav formulert:

Kandidaten

- har inngående kunnskap om vitenskapsteori og forskningsmetoder som anvendes innen medisin og helsefag
- har inngående kunnskap om vitenskapelig publisering og andre former for kunnskapsformidling.
- kan analysere nytten og usikkerheten i metoder og resultater for diagnostikk, prognose og behandling
- kan gjennomføre et selvstendig, avgrenset forskningsprosjekt under veiledning, i tråd med gjeldende forskningsetiske normer
- kan analysere og kritisk vurdere ny kunnskap og foreta faglige vurderinger i tråd med kunnskapsbasen og nyere forskning.
- kan bidra til nytenkning, innovasjonsprosesser, tjenesteinnovasjon, systematiske arbeidsprosesser og kontinuerlig kvalitetsforbedring.

Profesjonalitetssøylen

Informasjon:
https://www.uib.no/med/133821/profesjonalitetss%C3%B8ylen
Læringsmål:
https://www.uib.no/med/133828/l%C3%A6ringsm%C3%A5l-profesjonalitetss%C3%B8ylen
(Se også statlige forskriftsfestete mål gjengitt under).

Hovedoppgaver:

Medisinsk profesjonalitet ved Universitetet i Bergen «betegner de verdier, væremåter og relasjoner som skaper tillit til leger hos enkeltpasienter og i samfunnet». Profesjonalitetsøylen skal bidra til at studiet som helhet bidrar til studentenes profesjonelle danning til bredt kompetente leger, med pasientsentrerte kunnskaper, holdninger, ferdigheter og karakteregenskaper.

Under Profesjonalitetsøylen ligger bl.a. følgende oppgaver:

- Ledelse og administrasjon av PASKON
- Ledelse og administrasjon av mentorordningen
- Støtte av kommunikasjonsundervisningen, som spirallæring gjennom studiet
- Medisinsk etikk
- Kvalitetsarbeid mot praksisperiodene, inkludert forberedelse, etterarbeid og integrering med teoriundervisning.

I RETHOS (Forskrift om nasjonal retningslinje for medisinutdanning) § 24 er følgende krav formulert vedrørende «Profesjonalitet – Generell kompetanse»:

Kandidaten

- kan anvende sine kunnskaper og ferdigheter til å skape tillit hos pasienter, samarbeidspartnere og i samfunnet for øvrig
- kan anvende sin kunnskap om relevant gjeldende lovverk og profesjonsetiske retningslinjer og prinsipper i sin yrkesutøvelse
- kan identifisere, håndtere, analysere og reflektere over faglige og etiske problemstillinger i sin tjenesteutøvelse, samt uprofesjonell eller uetisk atferd hos andre leger og annet helsepersonell
- kan anvende kunnskap om språk og kultur i vurdering, planlegging for forebygging, behandling og oppfølging
- kan analysere egne læringsbehov og sørge for egen faglig oppdatering og livslang læring
- kan analysere grenser for egen faglige kompetanse, kan søke veiledning og ta hensyn til tilbakemeldinger

- kan anvende sine kunnskaper og ferdigheter til å ivareta egen helse og bidra til et godt arbeidsmiljø for seg selv og andre.

Kommentarer

De to søylene er viktige for å oppnå langsgående utdanningsmål som vanskelig lar seg ivareta i tilstrekkelig grad gjennom enkeltemnene. I begge søylene har imidlertid arbeidet måttet konsentreres om noen av oppgavene mer enn andre, slik at viktige oppgaver som hører inn under søylen har fått mindre oppmerksomhet enn ønskelig.

For akademisk søyle gjelder dette særlig koordineringen av helheten i den akademiske utdanningen. Det gjelder oppfølging, koordinering og kvalitetssikring av verktøyfagene som statistikk og epidemiologi, det løpende arbeidet med kunnskapshåndtering og kritisk lesing av litteratur, og oppfølging av skrivetrening gjennom studiet.

For profesjonalitetssøylen er det utnyttelse av praksisperiodenes store lærings- og danningspotensial som bør ha økende oppmerksomhet fremover, samtidig som kommunikasjonsferdigheter og pasientkontakt videreutvikles. For begge søylene, som for alle andre deler av studiet, betyr innføringen av Vestlandslegen at det i årene fremover vil være store oppgaver knyttet til å vedlikeholde og utbre gode læringsaktiviteter som allerede finnes, og sørge for at disse blir integrert på de andre studiestedene.

For begge søylene er det behov for å utvikle årlige tilbud om stabsutvikling og kollegaveiledning, slik at interesserte kolleger i alle emner får mer kunnskap om akademisk og profesjonell danning, og innsikt i metoder som kan fremme studentenes karakterutvikling og refleksjonsevne innenfor alle typer undervisning.

Ved oppstarten av Medisin 2015 var den nye studieplanen i støpeskjeen, og driften av de to søylene måtte utvikles «fra bunnen», gjennom prøving og feiling, med kunnskap og inspirasjon fra forskning og internasjonale forbilder. De mest åpenbare behovene kom først, og læringsaktiviteter som var mulige å gjennomføre med begrensete ressurser ble etablert og fungerer godt den dag i dag. Pionerfasen er nå over, fakultetet står overfor nye store oppgaver, samtidig som mange mål fra Medisin 2015 ikke er nådd. Vi som har ledet søylene fra start nærmer oss pensjonsalder. Når det nå må skje utskiftning av deler av komiteene for søylene, inkludert lederne, er det viktig at søylenes mål og oppgaver er godt kjent, at plasseringen i den medisinske studieplanen er tydelig, og at ansvar, myndighet og organisering er klar. Dette vil innebære noen justeringer av nåværende ordning.

Forslag som skal diskuteres

1. Medlemmene i komiteene for de to søylene oppnevnes av instituttene, og studentrepresentantene oppnevnes av MFU. Lederne oppnevnes særskilt av PUM for en gitt periode, og bør gå på omgang mellom instituttene. Instituttene skal sikre at Akademisk søyle og Profesjonalitetssøylen er bemannet med representanter fra alle de fire instituttene, samt to studentmedlemmer med vara. Akademisk søyle har også en

representant for Universitetsbiblioteket. Arbeidet med å lede søylene anerkjennes som undervisningsrettet arbeid på linje med ledelse av semesterstyrene.
2. Lederne av Akademisk søyle og Profesjonalitetssøylen er fullverdige medlemmer av PUM, med vararepresentanter.
3. Akademisk søyle og Profesjonalitetssøylen skal ha en årlig rådgivende presentasjon i PUM, med gjennomgang av elementene i søylene; mandat, aktivitet, resultater, bemanning, muligheter og utfordringer. Dette for å få innspill fra PUM til søylenes ledelse, og gi mulighet for nye og gamle medlemmer i PUM til å holde seg orientert og melde inn saker og temaer som kan angå søylene, eller hvor søylene representerer ressurser for ulike fag og miljøer.

Saken sendes til instituttene for innspill etter saken har vært drøftet i PUM.

Bergen, 22.3.2024

Arne Tjølsen
Professor IBM
Leder av Akademisk søyle

Edvin Schei
Professor, IGS
Leder av Profesjonalitetssøylen

UNIVERSITETET I BERGEN
Det medisinske fakultet

Arkivkode:	**Programutvalg medisin**
Sak nr.: 7/24	Møte: 17.04.24

Drøfting: Evaluering av PUM

Det er tid for å evaluere møtene til Programutvalg for medisin (PUM). Evalueringen gjennomføres for at møtet kan utvikle seg videre, og sikre at møtene er vel anvendt tid for alle representanter.

Mandatene til programutvalgene ved Det medisinske fakultet er blitt vedtatt av fakultetsstyret, og finnes her: https://www.uib.no/med/66123/mandat-programutvalgene . PUM består av 1 leder, 12 semesterstyreledere, 1 representant fra Vestlandslegen, 3 studentrepresentanter og 3 faste observatører. Deltakerlisten for PUM finnes her: https://www.uib.no/med/63946/programutvalg-medisinstudiet#medlemmer-pum

Det er ønskelig at PUM tar en evaluering av rammene for møtet og saksgangen for PUM.

- Forberedelser av saker (størrelse, detaljeringsnivå og timing)
- Forankring av saker i semesterstyrene
- Kategorier av saker
- Prosess i møtet (presentasjon av saker, diskusjon, brainstorming m.m.)
- Møtehyppighet
- Tid (til forberedelse og til møtet)
- Saker fra studentene

H.W./L.H.W.
09.04.24

Vedlegg uten sak

Programutvalg for medisin 17.04.24

Vedleggsliste:

1. Forskning i profesjonssøylen
2. Referat fra samarbeidsmøte med Helse Fonna 08.03.24

Publisert forskning om læring i profesjonssøylen på medisinstudiet i Bergen: Orientering til PUM

Profesjonssøylen vil orientere programutvalgets medlemmer om funnene i tre artikler som nylig er publisert om undervisning i medisinsk profesjonalitet i Bergen. Studiene inngår i Eivind Valestrands phd-avhandling, som er innlevert til vurdering, med hovedveileder Monika Kvernenes (EFL) og biveiledere Steinar Hunskår og Edvin Schei (IGS). Ledende kanadiske forskere er medforfattere på artiklene.

Artikkel 1 handler om medisinstudenters profesjonelle identitetsdannelse i faget Pasientkontakt (PASKON), gjennom kombinasjonen av pasientmøter, pasientsentrert medisinsk teori og veiledet skriftlig refleksjon om egne livserfaringer. Artikkelen **"Transforming self-experienced vulnerability into professional strength: a dialogical narrative analysis of medical students' refective writing"** ble I februar publisert i det anerkjente tidsskriftet Advances in Health Sciences Education, https://link.springer.com/content/pdf/10.1007/s10459-024-10317-3.pdf.

Hovedfunn, basert på kvalitativ analyse av 68 refleksjonsnotater, er at "studentene utviklet en personsentrert innstilling til legearbeid ved å: (1) anerkjenne og identifisere seg med pasienters sårbarhet, (2) oppleve den helende virkningen av å dele fortellinger om egen erfaring, og (3) utvikle profesjonell styrke fra personlige opplevelser.»

De to andre artiklene i avhandlingen, publisert i ledende tidsskrifter på nivå 1 og 2, belyser legers læringsprosesser når de som klinikere får en uvant identitet og nye utfordringer som mentor for studentgrupper på universitetene i Tromsø, Montreal (McGill University) og Bergen. Gjennom analyse av individuelle intervjuer vises det at mentorrollen krever en annen væremåte og tenkning enn klinikerrollen, og at forståelse av hvordan man kan understøtte andres tenkning, modning og læring ikke kommer «av seg selv». Artiklene kan brukes til å utvikle målrettet stabsutvikling, med veiledning og teori som kan bidra til pedagogisk kompetanse blant klinikere.

- **Threshold concepts in group-based mentoring and implications for faculty development: A qualitative analysis**, Medical Teacher, 2021, https://www.tandfonline.com/doi/full/10.1080/0142159X.2021.1931077
- **The liminal landscape of mentoring—Stories of physicians becoming mentors.** Medical Education, 2023 https://asmepublications.onlinelibrary.wiley.com/doi/full/10.1111/medu.15117

Betydningen av forskning er selvsagt langt mer enn funnene i ulike studier. Viktigere er det at vårt fakultet utdanner forskere og miljøer som blir bredt orienterte og metodologisk dyktige innenfor medisinsk pedagogikk, og blir del av et internasjonalt nettverk. At dette skjer i Bergen er svært gledelig. Det er en frukt av arbeidet som i sin tid ledet frem til etableringen av Enhet for læring, og av nyvinninger som senere har skjedd i regi av EFL og andre engasjerte utdanningskrefter på fakultetet.

Edvin Schei

Leder av profesjonssøylen

Referat fra møte i samarbeidsutvalg mellom Helse Fonna og Universitetet i Bergen/Det medisinske fakultet

Tid: Fredag 8. mars 2024 kl. 10.30 – 12.30
Fysisk møte i Haugesund, kurs og møterom 3, 1P158 inkl. digital deltakelse fra noen repr. i Bergen

Møtedel 1: kl. 10.30 – 12.00 - strategiske drøftinger på ledernivå
Møtedel 2: kl. 12.00 – 12.30 - saker av praktisk/administrativ art

Møtedeltakere:

UIB-MED	HELSE FONNA
Marit Øilo, visedekan for utdanning *(møteleder)* Simon N. Dankel, prosjektleder Vestlandslegen Ørjan Leren, assisterende fakultetsdirektør Heiko Bratke, faglig koordinator UiB i Helse Fonna	Andreas Andreassen, fagdirektør Haldis Økland Lier, seksjonsleder for forskning og innovasjon Ingrid Stava, rådgiver Erik Wulst, overlege, spesialist i ortopedi
Digital deltakelse: Pål Rasmus Njølstad, instituttleder Klinisk inst. 2 Harald Wiker, leder programutvalg medisin Anne Berit Guttormsen, studieleder Klinisk institutt 1	**I tillegg deltok følgende i møtedel 1:** Anders Hovland, adm. direktør Kjersti Tollaksen, klinikkdirektør Klinikk for kirurgi Anne Beth Njærheim, klinikkdirektør Stord John Conrad Brandsø, klinikkdirektør Med. klinikk Haugesund Odda
Sekretariat: Kristin Walter, seniorrådgiver, Studieseksjonen MED/UiB Jeanette Johnsen Schultz, administrativ koordinator UiB i Helse Fonna	
Forfall: Instituttleder Klinisk institutt 1 Christian Vedeler, HR-rådgiver Finn Arne Åsbu	

Møtedel 1

Sak	TEMA
01-24	**Studieplanarbeid Vestlandslegen** 1. **Om prosjektet og organiseringen ved Det medisinske fakultet UiB** v/ visedekan Marit Øilo Orientering om både de nasjonale føringene, studiemodellen og organiseringen. Det ble vist til etableringen av en styringsgruppe for Vestlandslegen, der representanter fra hvert av foretakene deltar som en referansegruppe en gang per semester. Nærmere informasjon finner en på nettsidene Prosjekt Vestlandslegen - organisering | Vestlandslegen | UiB 2. **Status pilotering i Stavanger-regionen** v/ prosjektleder Simon N. Dankel Orientering om oppstarten av pilot i Stavanger h-23, og videre rekruttering av studenter. Fra høsten 2024 lyses det ut 40 studieplasser til Stavanger gjennom Samordna opptak. Det ble orientert om ansettelser i Stavanger, både faglig studieleder, faglige koordinatorer for

	fag/studieår (50%) og bistillinger (5-20%) i sentrale kliniske fag. I disse dager lyses det ut stillinger for allmenn-/samfunnsmedisin (6. studieår). I egen referansegruppe i Stavanger blir studieopplegget detaljplanlagt, og der deltar også Stavanger kommune og Universitetet i Stavanger. Informasjon om studieløpet på nettsiden: Vestlandslegen - studieløp Stavanger | Vestlandslegen | UiB Innspill i møtet; det er utfordringer med 50%-stillinger, UiB kan ikke konkurrere på lønn. Det ble vist til ny avtale mellom UiB-MED og SUS der det lyses ut karrierestipend for ansatte i UiB-bistillinger. Vi må se på regionale og lokale tiltak, for det som virker ved OUS og i sentrale strøk er ikke direkte sammenliknbart med Vestlandet. Åremålsstillinger er viktige for å ivareta fleksibilitet i samarbeidet, kan brukes aktivt i oppbyggingen av kompetanse i en ny studiemodell - synergier mellom foretak og fakultet. Innspill om at fag som ikke finnes i Fonna og Førde må håndteres, og at faglig samarbeid på tvers også kan bidra til å gjøre undervisningen mer robust.
02-24	**Oppbygging av vitenskapelig og pedagogisk kompetanse i Helse Fonna - strategisk arbeid i forbindelse med Vestlandslegen** Drøfting av hvordan fakultetet og helseforetaket sammen kan ivareta faglig samhold og synergieffekter i arbeid med Vestlandslegen. Saken inkluderte innspill om *kompetansebygging i mindre helseforetak* som har kommet via Regionalt samarbeidsorgan for forskning og innovasjon, møte 22.02.23: det meldes at det er satt av 5 millioner i året for de mindre foretakene. Enighet om at en må få til samarbeidsprosjekter i felleskap, stimulere miljøer som ønsker å bygge kompetanse og satse på forskningsaktivitet. Må i tillegg bygge pedagogisk kompetanse. I samarbeidsmøte mellom UiB-MED og Helse Førde i januar ble det enighet om å nedsette en arbeidsgruppe som skal se på tiltak for forskningssamarbeid. Førde er positiv til at denne gruppen også kan inkludere drøftinger med Helse Fonna. Fakultetet ønsker å involvere forskningslederne på instituttene i denne arbeidsgruppen, og vil prioritere å få gruppen i gang. Aktuelle deltakere fra helseforetakene er forskningssjef og faglig koordinator. Ved stillingsutlysninger kan en være bevisst på å prioritere søkere med noe forskningskompetanse, bl.a. studenter fra forskerlinjen. Det må eventuelt være tydelig definert både i utlysninger og intervjuer. På den måten kan det bli lettere å rekruttere folk som har lyst til å forske, samt at de vil kunne ta PhD på kortere tid. Det er lagt til rette for at forskerlinjestudenter kan kobles på prosjekter i Vestlandslegen.
03-24	**Fremtidige arealdisponeringer i forbindelse med Vestlandslegen – behov og muligheter** Oppfølging av sak 07-23 fra sist møte. Helse Fonna ønsker mer innspill om hvordan de kan rigge seg arealmessig i planleggingen, herunder hvilke behov det er for undervisningsarealer.

	God sambruk av arealer er nøkkelfaktor her, fakultetet viser til at det er dialog med bl.a. Universitetet i Stavanger når det gjelder undervisningsarealer i Vestlandslegen. I Haugesund er det aktuelt å tenke sambruk med Høgskolen på Vestlandet. Sambruk blir også viktig for å holde kostnadene nede. Det vises også til den planleggingen om Campus Vi som pågår i Helse Førde om Campus Vie, jfr. omtale på nettsiden; Samarbeid om eit felles campus for utdanning, forsking og innovasjon på Vie | Det medisinske fakultet | UiB
04-24	**Aktuelt om studenter i praksis, studieplan Medisin 2015** v/ Heiko Bratke, faglig koordinator for UiB i Helse Fonna Det ble vist resultater fra evaluering av studentene som var i praksis høsten 2023. Studentene er godt fornøyde med opplegget i Haugesund. Fakultetet formidlet at den samme gode tilbakemeldingen på praksis gis av studentene i Studiebarometeret. Helse Fonna ber instituttet om å få på plass tilsatte i noen åremål på kirurgiske fag. Erfaringen er at det for noen fag er gunstig med delte stillinger, dvs. 2x10% stillinger i stedet for 1 20% stilling. Må samtidig passe på at det ikke er ulemper ved å være UiB-ansatt i 10% stilling. For praksisperioden i psykiatri er det erfart at studentene kunne vært bedre forberedt på hva de møter i BUP-praksis/klinikk. Fakultetet melder videre til aktuelt semester (MED7).
05-24	**Tilleggsavtale for 2024 –** *Avtale om innkvartering av studenter, administrativ ressurs og kontordrift, Helse Fonna og UiB/ MED.* Utkast til avtale er under signering. Det ble kommentert fra Helse Fonna at beløpet som er satt av til kontordrift (punkt 3.2) ikke er prisjustert slik som hyblene er. Siden avtalen gjelder årets budsjett blir det ingen endring i beløpet i år, men fakultetet tar med seg tilbakemeldingen om ønsket prisjustering tilbake.
06-24	**Gjensidige orienteringer:** ○ **Planlagt pedagogisk kurs i Haugesund høsten 2024;** bygger på PROFMED-prosjektet, og det legges opp til 5 samlinger. 14 lektorer skal delta, og oppfordring om at de får på plass sin åremålstilsetting før den tid. Fakultetet bekreftet i møtet at det kan påregnes finansiering til kurset fra prosjekt Vestlandslegen. Pedagogikkmiljøet ved UiB er oppfordret til å bidra med flere tilbud om digitale kurs, og det kan også være aktuelt å ta pedagogiske kurs som tilbys av HVL. ○ **Helse Vest sitt flytdiagram for vanskelige veiledningssaker** (var vedlagt); Det kommenteres at de som er definert i roller som praksislærer og praksisveileder ikke selv vet hvilke roller de har, det må jobbes mer med bevisstgjøring på både roller og skikkethetsvurdering ved foretakene.